

CHAPTER XXX

MONEY AND ITS IMPORTANCE

DEFINITION OF MONEY

Working definition. Money is one of those terms which are difficult to define. Many definitions have been suggested. Every one of these definitions is superior in its own place because different definitions are appropriate for different purposes. It is not possible to suggest a definition which will suit all occasions. Difficulties of defining money can be understood only after we have studied the functions of money. To begin with we can, at best, suggest a working definition of the term.

Writers on monetary topics agree on a number of points, namely :

- (1) that money is an instrument of exchange so that it facilitates exchange of goods and services ;
- (2) that a thing can be considered as money only if it is acceptable to a *fairly large number of people* ;
- (3) that money is accepted in exchange for goods and services, because its recipients believe that it will be accepted by others when they (the recipients) purchase goods and services.

The second point creates real difficulties. The term "fairly large number" is difficult to define. For our working definition it is advisable to think in terms of universal acceptability in a given area, so that money is assigned the status of general purchasing power. Whether universal acceptability is assured by the sanction of law or otherwise, is unimportant for our purpose.

We may define money as all those things which are readily and universally accepted in a given political area in discharge of business obligations. Such a business obligation might arise from the purchase of a product or service, or from the use of a commodity or factor of production, or from a loan.

Money-of-account and money proper. We would do well to distinguish between money-of-account and money proper at the very outset. Rupee was introduced as common money in India in 1833.¹ Since then rupee has continued to remain our standard coin. But its contents and shape have been changed a number of times, so that a rupee coin today is smaller and contains less silver than the rupee of, say, the Victorian era. Suppose a man took a non-interest bearing loan of

1 Before that there was a bewildering variety of gold and silver coins in circulation.

Rs. 500 in 1880. If he had repaid the loan in, say, 1888, he would have paid five hundred "bigger" and "richer" Victorian rupees. Today he can clear off the debt by paying five hundred smaller "lion pillar" rupees which contain less silver. The repayment in both cases is of the order of Rs. 500. But in one case rupee means one kind of coin and in the other another kind of coin. Rupee continues to be our standard coin but our rupee has changed. In economic parlance we would say that money-of-account has remained the same, but money proper has changed. Money-of-account is that in terms of which prices are expressed, contracts are made, and accounts are kept. Money proper is that in terms of which prices are paid, loans are repaid, and business obligations are met. Money-of-account is the description; money proper is what conforms to that description.

FUNCTIONS OF MONEY

Money performs three important functions. It serves as a medium of exchange. It provides a uniform standard of value. And it serves as a store of value.

Medium of exchange. Exchange is indispensable to a society in which there is division of labour. Direct exchange of goods, i.e. barter, is possible only when there is double coincidence of wants and possessions. Either party possesses and spares exactly what the other party wants. Wants and possessions have to coincide not only in kind and quality but also in quantity. Hence barter requires that either the two commodities exchanged happen to be of equal value, or that they are perfectly divisible. These difficulties are solved when money intervenes as a medium of exchange. For instance, if a person has a knife to sell and a pen to get, he first finds a buyer of knife who need not possess a pen. The knife is sold for money and the money is paid to procure the pen. Money can perform this function because of its general acceptability. A medium of exchange renders an invaluable service whatever the stage of economic development, but its importance in an economy characterised by complex division of labour and large scale production is very great indeed.

Standard of value. The other function which money has to perform is to provide a unit of account, a denominator in terms of which all values are expressed. All kinds of money, i.e. all those kinds of things which are serving as media of exchange, do not perform this function. Only one of these, known as standard or definitive money, serves as a unit of account. Not only are prices of goods and services expressed in terms of this unit of account, even the values of other kinds of money are expressed as multiples and sub-multiples of it. Thus in our country rupee is the standard money. The other moneys are two-rupee notes, five-rupee notes, half-rupee, one-fourth rupee, etc. etc. Money, by providing a common measure of value, makes calculations easy and comparable.

Subsidiary to the function of money as a unit of account, is its

function to serve as a standard of deferred payments. Promises of future payments arise out of present (or past) transactions. A person, who makes a purchase on credit, does so on a promise of future payment. Similarly, when a person takes a loan, he does so on a written or verbal promise to make repayment at a future date. What would be the form and value of future payment, has to be decided at the time of transaction which gives rise to it. Money provides a convenient form as well as measure of this payment.

Store of value. Lastly, money serves as a store of value. Whenever we want to put aside some value for future use, we keep it in the form of money. Other things may physically perish, or may otherwise lose their value. Or, may be that they are too bulky or too heavy to handle. Generally, the commodity selected to serve as money is such as has the minimum of these defects. More important than this is, however, the certainty that it will be generally acceptable in exchange for any commodity or service. Its chief recommendation for the job of a store of value is that it is widely acceptable, *i.e.* that it is the most "liquid" asset.

Relative importance of three functions. Which of the three functions is the most important, is rather difficult to say. Adam Smith observed in his "Lectures on Jurisprudence" that money came into existence because a common measure of value became necessary. Thus the measure-of-value function was treated as the primary function and the medium-of-exchange function as of secondary importance. In the "Wealth of Nations", however, money is treated, first and last, as a medium of exchange. In his chapter "On the Origin of Money", the measure-of-value function is not mentioned at all.

Among the modern economists there are some who attach great importance to the medium-of-exchange function, while others do the same to the store-of-value function. This difference of emphasis has given rise to two versions of what is known as the quantity theory of money. An account of these two versions, known as the cash-transactions version and the cash-balances version, is given in chapter XXXII.

Defining money on the basis of functions. Considering the medium-of-exchange function of money, we can define money as anything which serves as a means of payment. But things may serve as means of payment in a very limited circle and may not be generally—much less, universally—acceptable. If we define money as those things which serve as a means of payment among a group, however small, then our definition would include more things in the category of money than we would. Similarly, in deference to the measure-of-value function of money, Cannan defines it as "the unit of account commonly used in purchases and sales and other commercial transactions."² This definition is too narrow because it would give the status of money to standard money only. As money serves as a store of value, it may be defined

as 'the most liquid' asset. Liquidity of an asset is defined as the readiness with which it can be converted into money without losing its value. Obviously, to define money in terms of its liquidity is to define it in terms of itself, which is absurd. It is in view of this bewildering situation that Seligman observed that money is what money does, *i.e.* money is that which performs the functions of money. This definition, it will be realised, carries us back to functions and we find ourselves arguing in a circle.

IMPORTANCE OF MONEY

Its importance lies in its functions. Importance of any thing in a situation arises from the functions which it performs in that situation. The importance of money to an economy lies in the fact that it removes the difficulties of barter system of exchange. By serving as a medium of exchange, it obviates the necessity of double coincidence of wants and possessions. It also enables the people to overcome the difficulty created by indivisibility of commodities. It provides us with a convenient medium in which savings can be kept. As it provides a standard of value, large scale production is made possible, borrowing and lending smooth, and taxation easy.

Importance to consumers. Importance of the use of money can be gauged by considering how it proves helpful to various economic entities. Take a consumer. His scale of preference depends on the relative importance of the uses to which various commodities can be put. Relative importance is subjective and, hence, he is himself the best judge of it. But scale of preference also depends on the relative prices of various commodities. Comparison of prices is easy to make only if all prices are expressed in term of a single denominator. Money provides such a denominator. When all prices are expressed in money, decisions about purchases become easy to make. Use of money, therefore, enables a consumer to make an economically rational distribution of his income among various items of expenditure.

Importance to producers. Every producer has to decide which industry he should enter. For making this decision he has to compare the profit which he hopes to earn in the various industries. Similarly in deciding the size of his output he has to compare the profit which he will earn with various levels of output. To calculate profit, he must compare cost and price, which can be easily compared only if they are expressed in a common denominator. Money becomes that denominator. The producer has also to compare the payments for and the productivities of the factors for deciding how much of them he would employ. Once again money is helpful because wages, interest, and rent can be expressed in terms of money and can easily be compared with marginal revenue products of the factors. And making of payments to the factors also becomes easy because every body is prepared to accept money, and also because material used for it is such that it is easy to handle, to store, and to carry.

Money is not the end-product of economic activity. Money is thus an important instrument. Most of us, however, are apt to consider it more important than it really is. In the modern world, a man usually gets reward for his services in the shape of money. Money is a title to goods, and the more money a man has, the more goods he can procure. It becomes, therefore, our endeavour to see that we get the maximum of money for our services. Our attitude to increasing our money incomes so often assumes the form of treating money as the end-product of all economic activity.

We forget that what is required is to increase the amounts of goods and services which become available to us, and that more money may not always mean more goods. A higher money income will entitle a person to less goods if in the meanwhile prices have risen more steeply than his income. We may, therefore, have ample money and yet may not be able to lay our hands on goods we require. A millionaire with a lorry-load of currency notes might die of thirst in a desert. All his money will not help him to get a glass of water, just because there is no water. If only an increase in the amount of money could make people richer, there would have been no need for planning commissions; only printing of more notes would have done the trick. A country's prosperity is proportional to the size of its national output. Money helps as a generally acceptable medium of exchange. It is an instrument for social use. To treat it as an end-product is erroneous.

MONEY AS A VEIL

The veil attitude. While many laymen have an exaggerated notion of the importance of money, some economists have struck the other extreme. They speak of money as if it were just a wrapper for goods and services. They consider it just a veil which, though helpful, is a passive entity in the drama of economic activity. This "veil attitude" may be described as under:—

"The economist is interested in finding out what policies would promote economic welfare. Satisfaction, arising out of the use of economic goods, can be increased by making more economic goods available. In a money economy, command over economic goods is usually first procured in the form of money. Money is a useful social instrument in the economies of today. But money is just a medium of exchange. By serving as a go-between in transactions, it helps to make the process of exchange smooth. But that is all about it. Money is thus a tool of convenience which facilitates the run of economic activity but is not a determinant of the level of that activity.³ It helps to carry goods and services to their destinations, that is the consumers, but it is not a determinant

3 The position is analogous to that of a catalyst in a chemical action. A catalyst makes a chemical action swift; money makes the process of exchange smooth. Like a catalyst, money cannot change the contents of what it operates upon.

of the quantities produced of them. It is a veil which the economist must pierce through to have a look at what is *real*, i.e. the production and use of goods."

The treatment of money as just a veil or wrapper is misleading. It had a very disastrous effect on the mode of thinking of the classical writers. Treating money as a veil, they set out their analysis in *real* terms, i.e. in terms of goods and services produced and exchanged. In the ultimate analysis, they said, goods are exchanged for goods. A man, who produces one thing, creates a demand for the other things, which he would purchase. Supply thus creates its own demand. How could, then, there be a general glut? Thus considering money unimportant and setting it aside in economic reasoning, they were led to the conclusion which was so obviously wrong.⁴

Monetary system is an integral part of economic system. There is no doubt that, in the ultimate analysis, goods are exchanged for goods. There is also no doubt that communities can exist, and have existed in the past, without the use of money. But money, when introduced, does not remain just a tool of convenience. It influences the operative forces in the situation in which it is introduced. And all its influences are not of a helpful variety.

It is not the case that *given* goods and services would ultimately reach the consumers with as well as without money, the use of money only making it easier. The very fact, that exchanges become smooth with the use of money, tends to multiply the number of these exchanges. The difficulty of bringing about double coincidence of wants under barter compels many individuals to exchange their possessions for less wanted goods. Because of the same difficulty many transactions are not considered worth undertaking. This limits the amount of the product which a producer can sell. As producers can sell less, they also produce less. Specialisation, use of machinery, large scale production, and foreign trade are well-nigh impossible and, thus, production is much reduced.

A change in economic activity may necessitate a change in monetary policy. But a change, or a failure to bring about a change, in the monetary policy in its turn influences economic activity. Relationship between monetary policy and economic activity is one of action and reaction. Even the initiative might come from the side of monetary policy. The use of money as a social instrument is not a factor passive in respect of the level of economic activity. We cannot

4 Unfortunately Ricardo, Say and Mill did not listen to the warning of Malthus who observed: "Theoretical writers in Political Economy, from the fear of appearing to attach too much importance to money, have perhaps been too apt to throw it out of their consideration in their reasonings.....The circulating medium bears so important a part in the distribution of wealth, and the encouragement of industry, that it is hardly ever safe to set it aside in our reasonings, and all attempts at illustration, by supposing a certain quantity of corn and clothing, instead of a certain quantity of money, which every year represents a variable quantity of corn, cannot fail to lead us wrong."

look after the "economic system" and leave the "monetary system" to look after itself. Monetary apparatus, when it is there, becomes a part of the economic system. It influences, and is influenced by, the other constituents of that system. Violent and continuous changes in the value of money shake confidence of the people in the stability of the economic system and keep less venturesome people away from the field of investment and production. Similarly such changes affect trade, contracts, and borrowing and lending.

Thus monetary apparatus is not just a veil which covers the economic system. On the one hand, it serves the latter as a tool of convenience, but, on the other, it adds to its complexity. Its use does solve some problems, but it also creates new ones, and some of the new problems are very complicated indeed. It was with reference to such complicated problems created by money that Disraeli observed, "Money has made more people mad than love."

KINDS OF MONEY

Legal tender and optional money. Now we may familiarise ourselves with a number of terms. There is, first, the distinction between legal tender and optional money. The former includes all those forms of money which one resident of the country must accept from another resident upto unlimited amounts in discharge of business obligations. This status is the result of legal provision and he, who refuses a payment in legal tender, is liable to prosecution. In our country, rupees and all currency notes are full legal tenders. Optional money is one which, by convention, has come to be widely accepted though there is no legal compulsion for that. For instance some Afghan coins of smaller denominations circulate freely in some parts of the North-West Frontier of Pakistan without any legal sanction of the Pakistan Government behind them. Between the legal tender and optional money lies subsidiary money which must be accepted in payment upto a given amount, but in excess of that amount it may or may not be accepted. Thus, 25 nP. and 50 nP. pieces in our country are legal tenders upto a payment of ten rupees, but for larger sums their acceptance is optional.

Standard money and convertible legal tender. Standard money is the money in terms of which values of all goods and services, as well as of all other moneys, are expressed. A resident of the country is legally bound to accept standard money not only from another resident but also from the authority which is issuing standard money. A convertible legal tender is different. Its value is expressed as a multiple of standard money. A resident is legally bound to accept it from another resident, but not from the authority which is issuing that money.

In our country rupee coin is standard money. All other moneys are multiples or sub-multiples of it. It must be accepted from all parties in India, including the Government of India. A five-rupee note is a convertible legal tender. A resident must accept it from other residents, but he may not accept it from the Reserve Bank of India.

It must be noted that a "rupee-note" is standard money and not a convertible legal tender. On a five-rupee note, for instance, there is a written promise to pay the bearer five rupees on demand at any office of issue. We do not find any such promise on a one-rupee note which is issued by the Government of India. A "rupee-note" is not a note, it is a "rupee counterpart."

Token and full-bodied money. Token money is that money, market value of which is greater than the value of its contents. On the other hand that money, whose market value and intrinsic value (*i.e.* value of the contents) are equal, is called full-bodied money. We often hear that our rupee is worth only four annas. This means that the silver contained in our rupee is worth four annas only. Thus it is a token money. In India today there is no full-bodied money. Before 1931, pound sovereign was full-bodied money in England. Then its market value and its intrinsic value used to be equal. Pound sovereign no more serves as money. Today even in England all moneys are token.

Representative money. All our currency notes are acknowledgments of debt. They are IOU's. The debt owing entity is the Reserve Bank which is an organ of the government. So the currency notes are debts owing by the state. But the government has declared them legal tender, so that the residents of the country are legally bound to accept them in discharge of business obligations. Such moneys are called representative money.

Bank money. There may be acknowledgments of debt by banks. If they begin to be used as money, they will be bank money. For instance, if a bank prints notes and they begin to circulate as money, they will constitute bank money. Such notes are now rare. Some people say that cheques, when they pass from hand to hand, become money. This is wrong. Cheques are only instruments for transferring bank deposits. When cheques pass from hand to hand, it is not cheques but bank deposits which are being paid and accepted. Hence bank deposits, and not cheques, constitute bank money.

Bank money differs from representative money in two respects. First, in the former the debt owing entity is some bank while in the latter the state owes the debt. Secondly, representative money has a legal tender status while bank money is optional money.

Commodity money and fiat money. Lastly, we may distinguish between commodity money and fiat money. Commodity money is that the value of which is kept fixed in terms of a given quantity of a commodity—generally a precious metal. A full-bodied legal tender is commodity money, because its value remains fixed in terms of the material of which it is made. With a rise or fall in the value of the material, its value also rises or falls proportionately.

Money itself may be made of a cheap material but, if the issuing authority undertakes to exchange it for a fixed quantity of some precious

material, then, though money is token or managed money, yet for all practical purposes it is commodity money.

If the value of money is not kept fixed in terms of any material, it is fiat money. Market value of fiat money is determined by the demand for and supply of money and not by the value of its contents. Fiat money is convertible only into itself, *i.e.* into another fiat money. For instance, in India rupee notes and rupees are fiat money because their value is not kept fixed in terms of any commodity. Considering that even rupee coins are notes printed on metal, we may say that in our country all notes are convertible into other notes.

Further Readings :

1. Robertson : *Money*, Chs. 1-3.
2. Keynes : *Treatise on Money*, Vol. I, Ch. 1.
3. Chandler : *Introduction to Monetary Theory*, Ch. 1.
4. Hansen : *Guide to Keynes*, Ch. 1.

CHAPTER XXXI

THE BANKING SYSTEM

SOME IMPORTANT TERMS

In the study of the role played by banks in the economy of a country, we have to make use of a number of commercial terms. We start with explaining some of these.

1. *Bank deposits.* Sums standing to the credit of individuals and firms with banks are called bank deposits. Deposits which are secured by paying in money, or titles to money, are called cash deposits. If a sum is lent by a bank and is not paid in cash but is credited to the account of the borrower, the deposit thus created is called a credit deposit.

Bank deposits may also be classified on the basis of terms of withdrawal. They would then fall into three categories ; viz. fixed deposits, savings deposits, and current deposits. Fixed deposits cannot be withdrawn during a period agreed upon in advance.¹ In the case of savings deposits there is a limit placed on the amount which can be withdrawn, and the number of times withdrawals can be made in a week. There are no restrictions on withdrawals from current deposits. Rate of interest on fixed deposits is high, on savings deposits moderate, and on current deposits very low or even zero. While a cash deposit may fall in any one of these categories, credit deposits are almost invariably current deposits.

It is of interest to note that London clearing banks (which handle a very major part of the banking business of England and Wales) permit only two kinds of accounts, called current account and deposit account. The former resembles the current account of our country. The latter, however, is different from fixed deposit. The amount standing in a deposit account is repayable at seven days' notice. It cannot be drawn upon by cheques. But in practice banks rarely object to transfer of funds from deposit account to current account so that a cheque drawn upon the latter may be encashed. Also direct withdrawals from deposit account are permitted subject to a payment of penalty in the form of loss of interest. Hence for all practical purposes deposit accounts of these banks can be treated as current deposits. These banks are not interested in savings accounts.

It is sometimes helpful to divide deposits into demand deposits and time deposits. The amount in a demand deposit is payable on

¹ Some banks allow withdrawals from fixed deposits if notice of such withdrawals is given sufficient time in advance.

demand while that in a time deposit becomes payable on or after a fixed date. Obviously, all current deposits are of the former class while all fixed deposits are time deposits. Savings deposits are divided between the two heads according to the rules of the banks in respect of withdrawals from them. It will be readily noted that it is both convenient and correct to treat current deposits as well as amounts held in deposit accounts by the London clearing banks as demand deposits.

2. *Cheque.* A cheque is an instrument by which withdrawals are made from bank deposits. It may be defined as the order of a depositor to his bank to make a specified payment in a specified manner. Cheques may be classified according to the manner of payment specified. If the sum is payable to anybody who presents the cheque, it is a bearer cheque. If it is payable to a specified person or his endorsee, it is an order cheque. Lastly, if the amount is not payable in cash but is to be credited to a bank account, it is a crossed cheque.

3. *Overdraft.* An overdraft refers to the act of overdrawing. It also means the amount by which a cheque (or cheques) drawn by a depositor may exceed the amount standing to his credit. Overdraft facility is a mutual arrangement between a depositor and his bank by which the former is allowed to overdraw. This facility is extended either to those firms which are considered sound by the bank, or to those who provide some collateral.

4. *Bill of exchange.* It is an order of a creditor (generally a seller) upon a debtor (generally a buyer) to make a specified payment in a specified manner.² The debtor is known as drawee. He must accept his responsibility for payment by writing the word "accepted" on it. Once this is done, it becomes a written promise by him to make the specified payment on the specified date. It then becomes negotiable. It is usual to get a bill of exchange guaranteed by some firm of repute so as to increase its marketability.

There are many ways in which bills of exchange may be classified: For instance a bill may be a "bearer" or an "order" bill, or it may be an inland or a foreign bill. For our purpose the important classification is between *sight drafts* and *time drafts*. The former are bills of exchange payable on presentation. The latter are payable a specified time after they have been accepted. It is the latter which interest us more because it is these which enter the discount market.

IMPORTANCE OF BANK DEPOSITS

Banks are traders as well as creators of money. Those firms, with which people deposit their savings or other cash holdings and from which people borrow for various purposes, are called financial institutions.

2 Radcliff Committee has defined a bill of exchange as "an unconditional order in writing addressed by one person to another, signed by the person giving it, requiring the person to whom it is addressed, to pay on demand or at a fixed or determinate future time a sum certain in money to or to the order of a specified person or to bearer," *Report*, p. 64.

Investment houses, finance corporations, insurance companies, co-operative credit societies, and banks—these are all institutions of this category because they trade in money. Banks are, however, different from other financial institutions in one very important respect. We have pointed out in the last chapter that bank deposits form a part of aggregate circulating media. They are money because they are used for meeting business obligations. Now, bank deposits are the debts owing by banks to the people. Thus of all financial institutions, it is the debts of banks only which can be used as money. As we shall see presently, banks have the power of increasing deposits with themselves. Hence, while like other financial institutions they are traders in money, unlike them they are creators of money also.

This is the vital point of distinction between banks and other financial institutions. The IOU's of a co-operative credit society, for instance, are not circulating media; those of a bank are. We may, therefore, define banks as financial institutions whose debts are used and accepted by the people in settlement of business obligations.

It may be objected that it is not correct to treat all bank deposits as money because though they are available to the public for clearing off business obligations, it is not certain that they are thus used. Fixed deposits cannot be used for this purpose. Only a proportion of savings deposits can be used. And it is rare that every depositor uses his whole current deposit at any time. The objection is valid so far as time deposits are concerned. But it has no validity in respect of demand deposits. All that *can be used* as money, is money. Even some currency notes continue to lie in the cash-boxes of the people and are not used for business purposes. Yet they are money by any definition. All demand deposits of banks are, therefore, money whether they are being actively used or not.

Place of bank money in total money. The proportion of bank deposits to total money available to the public varies from country to country.³ In advanced countries, like England, bank deposits are by far the most important ingredient in the total supply of money. Consider, for instance, the following position:

TABLE XXXIa

Money Supply with the Public in Great Britain⁴

March, 1960

			£ Millions
Notes with the public .. ..	..	..	2014 (Approx.)
Bank deposits .. ..	..	..	7047 (")
Total			9061 (Approx.)

³ It also varies from time to time in the same country.

⁴ Figures given are not exact but they are not far removed from actuals.

Thus bank deposits formed about 80 *per cent* of the total money supply with the public. In underdeveloped countries, like India, bank deposits play a much less important role. Given below are the figures for this country as in March, 1960.

TABLE XXXIb

*Money Supply with the Public in India**March, 1960*

Rs. Crores

Currency with the public ⁵	..	..	1860 (Approx.)
Bank deposits	..	..	840 (,)
		Total	2700 (Approx.)

Here we find that Bank deposits formed only about 31 *per cent* of the total money available for use to the public. However, variations in the quantity of bank money have their importance even in a country like ours. For instance, if the currency authority in India is making increasing amounts of state money available to the public, their purpose for so doing may be defeated if the banks are at the same time reducing deposits. It is, therefore, as necessary in India as in England that banks' policy conforms in its direction to the policy of the monetary authority.

FUNCTIONS OF A BANK

Non-banking functions. Banks perform a large variety of functions. These functions may be broadly divided into banking functions and non-banking functions. Non-banking functions refer to those services which banks render to their clients not as banks, but as profit-seeking firms. These functions, therefore, do not fall within the purview of banking proper. Thus banks may undertake to make purchases and sales of shares, bonds, securities, precious metals, etc. on behalf of their clients. Similarly they may undertake to be "watchmen" of valuables, executors of wills, and administrators of family trusts. They may collect or pay bills, dividends, insurance premia, and the like. They may also undertake to make arrangements for travel, to advise their customers in matters of investments, etc. etc.

Banking functions. Banking functions can easily be classified into exchange of money claims and creation of credit. The former resolves itself into a number of sub-functions. Creation of credit is considered the basic function of a bank.

A. Exchanging money claims. Exchange of money claims includes

5 It is constituted of notes in circulation *plus* rupee coins in circulation *minus* balances held at treasuries *minus* cash on hand with banks.

acceptance of deposits, giving loans and advances, discounting bills of exchange, and transferring money from one place to another.

1. *Accepting deposits.* As we have already pointed out, deposits differ from one another in respect of facilities for withdrawal and of rate of interest. People make their choice from among the various kinds on the basis of requirements of their families and business.

2. *Loans and advances.* Advances may be made to clients by the loan system or the overdraft system. The former is simpler. An amount is placed to the credit of the borrower who can withdraw the whole or a part of it as and when he likes. But for the period that the loan is not repaid, he pays interest on the whole sum, whether he makes use of it or not. Overdraft facility, on the other hand, means allowing a client to draw cheques in excess of the amount standing to his credit. Interest payable to the bank is only on the amount actually utilised.

3. *Discounting bills of exchange.* Discounting a bill of exchange is, technically speaking, purchasing a future claim of money. In essence, however, it means advancing a loan against a promise of repayment in future. An essential difference between advancing a loan and discounting a bill of exchange is that in the case of the latter the bank is certain that money is used for genuine trade purposes.

4. *Transfer of money.* Money may be transferred from one place to another by a bank draft or an advice or a cheque. Suppose a person desires to send money from Delhi to Bombay. He may give the sum (and some commission) to a bank at Delhi, and get a bank draft (*i.e.* an order) upon its correspondent in Bombay. The sum will be received by the payee in Bombay by presenting the draft to the correspondent. Or, the bank may be asked to write to its correspondent in Bombay to pay the sum to the payee. This is the method of advice. The third method is that a cheque is drawn on the bank in Delhi and it is sent to the payee, who can hand it over to some bank there for collection.

All the above banking functions can be summed up in a single function, *viz.* that banks exchange money claims. For instance, when a bank accepts a deposit, it exchanges present money for future money. Similarly, when a bank advances a loan or discounts a bill, it is exchanging future money for present money. Transfer of money from one place to another is the exchange of a money claim at one place for a money claim at another place.

B. The basic function. Exchange of money claims, by itself, does not entitle banks to any special place among financial institutions. As we have already noted, other financial institutions also trade in money. For example, a co-operative building society accepts deposits and advances loans. It deals in money claims. Yet it is only a financial institution. It is not a banking institution, because it is only a trader in money; it is not a manufacturer of money. The most important banking function, therefore, is creation of deposits. It is this function

which distinguishes banks from other financial institutions. We must now study how banks actually create deposits. This brings us to the principle of banking.

PRINCIPLE OF BANKING

Assumptions. For simplifying analysis, let us set aside the distinction between different kinds of deposits and assume that all deposits are current deposits, that is they are withdrawable without any restriction. We also assume that the banks have no capital of their own.

The problem. Now, suppose a bank accepts deposits from the people and keeps their money in a safe place so that the whole amount is available every and any moment for repayment. How will the bank, then, meet its expenses of establishment? One method is that the bank tells the clients that it is rendering them a safe deposit service for which it is entitled to some payment. The rate of interest will, then, be negative. This was the case in the early stages of banking. But the "bank" was then not a banker; it was a goldsmith. Today the situation is different. The bank finds that the depositors would not only not pay any charges, on the other hand they expect a return.

The solution. The solution lies in the fact that the bank can make some use of a proportion of the money deposited with it. It can lend out or invest it. Every bank has known it from experience that even when depositors are given complete liberty to withdraw their deposits as and when they desire, at no time do all of them come to demand their money back. What really happens on any given day is this. Some depositors might come to withdraw the whole money, some of them withdraw a part of their deposits, some do not come at all, and some of them as well as some new ones come to deposit more. Thus the bank has noticed that on any given day only a part of money held by it flows out but at the same time some new money flows in also.

If the inflows of money preceded as well as equalled the outflows, the bank could utilise the whole cash with which it started the day. But that does not happen. Sometimes the outflows exceed the inflows. Even if the outflows are less than the inflows, every outflow *may not be preceded by an equal inflow*. Hence some cash is required to ensure prompt payments. The bank need not keep in cash as much as its total liabilities, but it must keep a proportion of it in cash. The balance can be lent.

The minimum proportion of cash to total deposits, which is essential to ensure prompt payments, is known as safe cash ratio. The safe cash ratio depends on a number of factors. In the first place, it depends on banking habits of the people which, in its turn, depends on the existence or absence of a money market, wealth of business classes, traditions of the people, and the general commercial structure of the country. In rich and advanced countries, banking system is well developed and is widely made use of. The larger the number of people who keep bank

accounts, the smaller the percentage of cheques presented for cash payment. The safe cash ratio also depends on general state of confidence and trust among the people. In periods of war, peoples' confidence in economic and political stability is shaken and more demands are made on banks for cash. Banks have to keep more cash. Safe cash ratio for a bank also depends on its individual reputation and standing. Safe cash ratio for a "baby" bank is higher than that for an established one.

Suppose that safe cash ratio for a bank is 10 per cent. Further suppose that the total cash deposits with it stand at one lakh rupees. It will then require a cash of the order of ten thousand rupees. The balance of ninety thousand rupees can be lent out or invested. It is out of the earnings on this amount that the expenses, including interest to depositors, are paid. The solution has been found.

The story is, however, not yet complete. The bank can, in fact, take a long step further. As a rule, a bank does not lend out in cash. It only creates credit deposits in the names of the borrowers, and allows them to draw cheques on it. Now, the bank has known that it may allow full liberty to depositors to draw cheques and, yet, a cash of ten thousand will be enough against a liability of one lakh. It means that the balance of ninety thousand would be enough against a liability of nine lakhs, as is obvious from the following table:—

TABLE XXXIc

Safe Cash Ratio	Actual Cash (Rs.)	Liability it can meet (Rs.)
10%	10,000	1,00,000
10%	90,000	9,00,000

Hence what the bank is actually in a position to lend is not ninety thousand but nine lakh rupees. Actual cash is one lakh rupees. Total deposits with the bank become ten lakh rupees. Nine lakh rupees worth of credit has been created. No wonder then that banks have been called factories which manufacture credit.

Possible objections. Three doubts are possible to arise. It may be asked, firstly, that when the liability becomes ten lakh rupees, how it can be met by just one lakh rupees. The answer has already been given. It is possible because cheques are drawn to the extent of only a proportion of the total liability. Some of these cheques entail only book transfers; and if some money flows out, some money flows in also.

Secondly, it may be objected that if the bank does take upon itself a liability of ten lakh rupees, it becomes insolvent because its asset is only one lakh rupees while the liability is ten lakh rupees. This objec-

change the channels into which productive resources flow. Theirs is, therefore, a role of great significance in the economic system.

LIMITATIONS ON CREDIT CREATION BY A BANK

We have seen that, by lowering the rate of interest or by offering facilities in respect of security and repayment, banks can almost invariably attract more borrowers. We come now to the other related question, namely whether banks have an unlimited power to create credit or whether there are factors which set a limit to this power.

The two determinants. The following table will be helpful in this respect:—

TABLE XXXIc

Situation	Rs.				
	(1) Cash deposit	(2) Safe cash ratio	(3) Cash required against (1)	(4) Balance of cash (1)—(3)	(5) Credit which can be created against (4)
(a)	1000	20%	200	800	4000
(b)	1000	10%	100	900	9000
(c)	800	10%	80	720	7200

First consider situation (b). People have deposited one thousand rupees in cash. The bank considers 10% as the safe cash ratio, therefore against this liability it will keep a cash of Rs. 100. The balance of cash is Rs. 900 against which credit deposits up to Rs. 9000 can be created (safe cash ratio being 10%).

Now consider situation (a). Here cash deposit is the same but the safe cash ratio is higher. Larger cash is necessary to cover cash deposit. The balance of cash is smaller. And the credit deposit which can be created against this is smaller still because the safe cash ratio is high. Given the cash deposit, credit varies inversely with safe cash ratio. The higher the latter, the less is the bank's power to create credit.

In situation (c), safe cash ratio is the same as in case (b), but the cash deposit is lower. Once again we find that comparatively less credit

deposits can be created. The power of a bank to create credit thus varies directly with cash deposits.

Determinants of cash deposits. We find then that the power of a bank to create credit is a function of two factors, *viz.* cash deposits and safe cash ratio. The amount of cash, which people are likely to deposit with the banks, depends on the total amount of currency issued by the Central Bank, and the banking habits of the people. On any given day, the currency issued out by the Central Bank is held between the public and the banks. Given the total quantity, the proportion of it which people will keep with the banks depends on the banking habits of the people. When more people have learnt to keep bank accounts, cheques become a more convenient method of making payments and, therefore, people require less cash for meeting business obligations. Given the proportion of cash holdings which people will keep in the banks, the amount which they will actually keep in the banks depends on their cash holding. Other things being equal, if more cash is made available to the public, quantity of cash deposited with the banks will also increase, and *vice versa*.

Determinants of safe cash ratio. Level of safe cash ratio, we have already seen, depends on banking habits of the people and general state of confidence. The larger the number of bank accounts, the greater the possibility that payments by cheques would entail only book entries and less cash will be required. If public confidence is shaken by, say, a bank failure, pressure on banks increases and the safety level of cash ratio rises.

Conclusion. Thus we find that the extent, to which banks can at any time create credit, depends on three factors, *viz.* the amount of total currency issued to the public, banking habits of the people, and the general state of confidence. It is these three factors which set a limit to their power of creating deposits. The first and the second factors determine the amount of cash with the banks and the second and the third factor determine the safe cash ratio. Hence :

Credit deposit is limited by	{	Cash deposits	{	Total currency issued to public.
		Safe Cash ratio	{	Banking habits of the People General state of confidence

It must, however, be noted that the above analysis applies to a bank which keeps all the cash deposits in the form of cash. In fact it may not be so. The bank may purchase assets with a part of this cash. Then those assets, which can be readily and without loss converted into cash, can be helpful in meeting liabilities. Thus the power of a

bank to meet demands made on it depends on its liquidity ratio, rather than on its cash-deposits ratio. This will become clear as we proceed in this chapter and in chapter XXXIII.

LIQUIDITY AND PROFITABILITY OF ASSETS

Two aims. A bank must always be prepared to meet all calls for money made on it by the depositors as well as by those to whom depositors have issued cheques. It must have the capacity to produce cash on demand. This means that a sufficient proportion of its assets must either consist of cash or must be convertible into money with sufficient readiness at low cost. A bank, therefore, must so conduct its affairs as to maintain adequate liquidity.

No less an important consideration, than maintenance of liquidity, is that of income. The aim of every bank is not only to cover its expenses, but also to make maximum profit. It endeavours to keep its assets in such forms as yield maximum income.

Clash between the aims. The most liquid of all assets is money itself. If a bank were to attend exclusively to the objective of maintaining liquidity, it would keep all its assets in the form of money. But money is the most barren of all investments, because it does not yield any income whatsoever. On the other hand, if the bank were to keep its assets in the form of long-term loans, income from the assets would be high, but liquidity would be very low. Liquidity and income-yielding capacity are the two opposite criteria for every bank on the basis of which it has to decide the nature of its assets. The more liquid the assets, the less income-yielding will they be, and *vice versa*. The secret of success for a bank lies in striking a sound balance between liquidity and profitability.

Every bank divides its assets into forms of various degrees of liquidity and profitability. Some of its assets are kept in the form of cash which is very liquid, though non-income yielding. Some assets take the form of property which is of low liquidity but yields good income. In between the two lie other assets with different degrees of liquidity and income-yielding capacity.

BALANCE-SHEET OF A BANK

The balance-sheet of a firm shows its liabilities and assets at a given point of time. It gives an idea of the stature and prosperity (or otherwise) of the firm. The balance-sheet of a bank also signifies all this. But its study is instructive for another reason. It reveals in what form the bank is keeping its assets. It gives an idea of the ratio in which various degrees of liquidity and profitability are being maintained. We give below the position of Indian scheduled banks⁶.

6 The Indian Scheduled Banks handle about 86% of all the business done by commercial banks (Indian as well as foreign) in India. Even if we include the co-operative banks which keep account with the Reserve Bank, the share of Indian Scheduled Banks comes to 84.5%.

TABLE XXXIF

*Consolidated Position of Indian Scheduled Banks. (78 Banks)
March, 1960.*

(Rs. crores)

Liabilities		Assets		Assets as percentage of Aggregate deposits.
1. Share capital and reserves	69	1. Cash in hand	59	8.2
2. Demand Deposits	652	2. Balances with Reserve Bank	78	
3. Time deposits	1020	3. Money at call and short notice	5	1.3
4. Borrowings from other banks	90	4. Balances with other banks in current account	17	
5. Other Liabilities	97	5. Bills purchased and discounted	112	6.7
		6. Advances	801	47.9
		7. Investment in government securities	672	40.2
		8. Other investments	103	

To start with it may be noted that total assets do not equal total liabilities, because the figures do not cover the whole area of operation of the banks. Moreover, the figures have been rounded off. Now we propose to study the significance of the various items on the liabilities as well as the assets side. We shall find that the liabilities side is comparatively simpler to study. But it is the assets side which will be more instructive for us, because it indicates the position of the banks in respect of liquidity and profitability.

Liabilities

Share capital and reserves. Share capital and reserves comprise liabilities to the shareholders. It is this money out of which loans have to be met, if and when they are incurred. The significance of this item is, therefore, judged from its ratio to such assets as are apt to depreciate in value. Investments in securities, equities, and property are outstanding

examples of such assets (i.e. items no. 7 and 8 on the assets side). There is no conventional ratio in this respect, but some writers feel that 1:10 would be a safe ratio.⁷

Deposit liabilities. Demand and time deposits are those of the public and the banks. These two items are the most significant on the liabilities side. Their significance lies in the following facts.

(a) When the aggregate of these two items is increasing faster than the quantity of state money, it shows that people are becoming more banking-minded and more people are opening bank accounts, i.e. banking habit is spreading. It also shows that confidence in the banking system is high.

(b) A high ratio of time deposits to demand deposits indicates a high level of confidence in the economic system in general and in the banking system in particular. In case this ratio is falling, a loss of confidence is indicated. Moreover, if depositors transfer sums from time deposits to demand deposits, active money supply with the public will have increased, and *vice versa*.

(c) It is with reference to the aggregate of these two items that liquidity of the assets has a significance. The ratios, which indicate whether the banks are in a comfortable position or not, are cash-deposits ratio, investments-deposits ratio, and advances-deposits ratio. A rise in the first two indicates a comfortable position. On the other hand, if the third ratio rises very high, the situation becomes risky.⁸

Borrowings from banks. Borrowings from other banks are mainly those from the Reserve Bank and the State Bank of India. When the demand for cash increases, banks approach these institutions for advances against securities and bills.⁹ On the other hand, when the demand for cash decreases, these begin to be repaid. Hence movements in this item indicate whether cash requirements of the economic system are increasing or decreasing.

Assets.

Cash. Cash in hand comprises state money, i.e. coins and notes. Coins and rupee notes form a small proportion of it. Hence cash in hand consists mainly of currency notes which are the IOU's of the Reserve Bank of India. Deposits with Reserve Bank of India, known as *bankers' deposits*, are also its IOU's and are encashable on demand. Both of these, therefore, can be treated as equivalents, and that is exactly what is done in practice. Thus the term "cash" is to be interpreted

7 cf. Snyers: *Modern Banking* (3rd edition), pp. 58-9.

8 The Reserve Bank of India calculates these ratios on the basis of *net* deposit liabilities, that is excluding inter-bank deposits. This is presumably on the basis that liabilities to the public is the relevant concept. But deposit liabilities to other banks are no different. These banks will call in their deposits from a bank which is in difficulty. Hence it is the aggregate deposits which is a relevant concept. Of course advances from the Reserve Bank and the State Bank are on a different footing.

9 The State Bank does not rediscount, or advance against, bills.

here in a specific sense. It includes coins, notes, and deposits of the banks with the Central Bank of the country.

In the statement above cash in hand and *bankers' deposits* form 8.2 per cent of the aggregate deposit liabilities. This is the cash-deposits ratio and is of the greatest significance, because cash is a bank's first line of defence against demands by the depositors.

Money at call and short notice. Money at call and short notice includes three items. First there are cheques in the course of collection. Second, there are demand deposits with other banks, i.e. the State Bank of India and the Notified Banks. The third, and the most important, item included is the funds which banks make available to other banks at the latter's request and which are repayable on demand or at a notice of a fortnight or less *at the option of the lender*.

Evidently, all the three items are just a little removed from cash. Their liquidity being very high, they are treated by the banks as their second line of defence. In the above table this item forms 1.3% of the aggregate deposit liabilities.

Bills. Bills purchased are sight drafts while bills discounted are time drafts. The latter are like post dated cheques, which become payable when they mature. Their period of maturity varies from one to three months. But since bills can be used as collateral with the Reserve Bank of India, they are a more ready source of cash than appears at first sight.

Investments in securities. Investments in government securities are long-term investments, therefore their liquidity is, as a rule, low.¹⁰ In India there are not many large buyers of government securities, apart from the banks. Consequently, if the banks desire to unload sizeable portions of their holdings of securities in the market, they cannot find many buyers. Nevertheless, securities are assets against which banks may borrow from the Reserve Bank and the State Bank of India. For this reason, they are not classed among assets of low liquidity.

In fact bills and securities are the real shock absorbers; they are buffer assets.¹¹ Whenever there is a rush on the banks and cash and short-notice money do not prove adequate, the banks request the Reserve Bank and the State Bank for advances against these assets. This is how the investment-deposits ratio is significant. In our above table the investment-deposits ratio is 4:10¹².

Advances. Advances are mainly loans to the public. A small

10 Treasury Bills and Treasury Deposit Receipts are also included in this item, but they form a small proportion of the investments. Hence it is correct to describe investments as bound assets.

11 It would also not be wrong to say that borrowings from the Reserve Bank and the State Bank are shock absorbers. But borrowings are against securities, therefore the latter really measures *capacity* to absorb shocks.

12 We are not including bills in investments because mostly the bills are sight drafts. It is only time drafts which could be included in investments.

proportion of them consists of advances to banks, repayable after a period longer than a fortnight. Commercial banks do not, as a rule, advance long-term loans. Their period is rarely more than a year. In case, however, the debtor gets into some difficulty, recovery of loan money from him, even by the sale of the collateral, takes time, and may even involve some loss. Hence their liquidity is low.

Advances, together with bills purchased and discounted, are the source of supply of bank money to the public. They together constitute bank credits. And it is this item which needs to be controlled if the monetary authority is to ensure stability. A high advances-deposits ratio indicates risks. When this ratio rises above safe limits, the banks are supposed to be taking more risks than they should. Advances-deposits ratio in our above table is 54.4 (47.9 + 6.7) to a hundred. This is quite within safe bounds.

Other Investments. Lastly, there are investments in shares and in property etc. Indian banks very sparingly invest in shares of corporations. Investment in property is the least liquid of all assets, because if confidence of the people in a bank is shaken, sale of property by it aggravates the situation still further.

It must be noted that we cannot be dogmatic about how different kinds of assets can be placed in order of liquidity. For instance, on a given date a ten-year government security may be maturing after one month. It will, then, be more liquid than a three-month bill of exchange in the case of which only one month has elapsed.

BANKING PRACTICE IN INDIA AND ENGLAND

It will be quite interesting as well as instructive to compare banking practice in India with the same in England. The manner, in which seventy-eight Indian Scheduled Banks conduct their affairs, may be treated as representative of banking practice in India, because they handle 86% of the total business done by all the commercial banks. Similarly, the eleven members of the London Bankers' Clearing House handle about 85% of the total banking business in England, therefore their manner of conduct of business represents the position in that country. The main points of interest are the following:

1. *Nature of deposit liabilities.* Indian scheduled banks accept three kinds of deposits, namely current deposits, savings deposits, and fixed deposits. Deposits in the current accounts are withdrawable on demand, therefore they are demand liabilities. Fixed deposits are withdrawable after a period, varying between three months and one year. These deposits are time liabilities. Deposits in the savings accounts are partly demand deposits and partly time deposits. The portion of them going to each depends on conditions of withdrawal.

London clearing banks permit only two kinds of accounts, namely current accounts and deposit accounts. Deposits in the current accounts are withdrawable on demand. Deposits in the deposit accounts are withdrawable just on a week's notice. Evidently the period

of notice is short. Moreover, these banks generally permit transfer of funds from a deposit account to a current account. They also permit withdrawals from deposit accounts—though in both these cases the depositor loses interest of one week. Thus in the case of London clearing banks, amounts held in current accounts as well as in deposit accounts are *in effect* repayable on demand, and must be treated as demand liabilities. There are no time liabilities in their case.

2. *Cash-deposits ratio.* London clearing banks do not let the cash-deposits ratio fall below eight *per cent*. This is the “officially agreed” ratio. In India there is no such officially agreed ratio. Only every Indian bank must keep aside 5% of its demand liabilities and 2% of its time liabilities. Figures published by the Reserve Bank of India show that during the last few years cash-deposits ratio has varied between 8.5% and 6.3%. But the Reserve Bank does not include inter-bank deposits in the deposit liabilities. If that is done, then the cash-deposits ratio has sometimes fallen as low as 6%.

The comparison between cash-deposits ratios in India and in England is, however, misleading. The reason has already been stated. In England all liabilities are demand liabilities. In India a high proportion—61% in March 1960—of liabilities is time liabilities. Cash is required to cover demand liabilities, rather than time liabilities. Hence equal ratios in the two countries will indicate a much higher liquidity in India. Viewed in this light, 6% cash-deposits ratio does not indicate a risky state of affairs in India.

3. *Liquidity ratio.* The London clearing banks hold that, in addition to cash and money at call and short notice, bills are their liquid assets. These bills are bills of exchange and treasury bills of very short period of maturity, which they acquire from time to time from the discount houses. As their period of maturity is short, they are readily, and with little cost, convertible into cash.

It is a convention among the London clearing banks that the ratio of liquid assets to deposits should not fall below 30%. And they faithfully observe this rule. In India, it is provided in the Banking Companies Act that at the close of any day, cash *plus* gold *plus* unencumbered securities should form not less than 20% of a bank's demand and time liabilities.

The conception of liquid assets is not the same in the two countries. Money at call and short notice forms about 6 to 9 *per cent* of deposit liabilities in England. In our country they are hardly 1.5%. Similarly Treasury Bills occupy a much more important place in their assets than in ours. Moreover, they include bills of exchange in liquid assets but they do not accord the same status to government securities. When the demand for funds increases, they sell securities in the market. If the rate of interest has risen, they have to sell them at a low price. In our country bills of exchange and government securities are of the same importance, because banks can borrow against them from the Reserve Bank. For this reason, bills and securities enjoy a special status with the Indian banks which they do not have in England.

The Indian bankers have their own conception of safety. They consider it going very safe if cash, gold, bills and securities form 40% of deposit liabilities, and going unsafe if they fall to 20%.

4. *Advances-deposits ratio.* In England, if the advances-deposits ratio stands at seventy *per cent*, they consider it a happy position. Indian bankers also hold the same view.

5. *Other investments.* Other investments include shares, property, and trade investments. London clearing banks endeavour to hold these items well within the limits of their share capital and reserves. The combined balance sheet of the Indian scheduled banks given above shows that their "other investments" substantially exceed their share capital and reserves.

6. *Interest on advances.* In England the rate of interest charged on advances is related to the *Bank Rate*, i.e. the lending rate of the Bank of England. As a rule, customers are to pay one *per cent* above the *Bank Rate* subject to a minimum of five *per cent*. Evidently, every rise or fall in the *Bank Rate* affects the condition attached to advances, provided the *Bank Rate* does not fall below four *per cent*. The practice in India also is quite similar.

ROLE OF THE BANKING SYSTEM IN ECONOMIC DEVELOPMENT

What part can the banking system of an underdeveloped country play in her economic advancement? Answer to this question can be given if we refer to the functions of banks. If one were to shed off details and summarise their essential functions, one would be left with only three of them, i.e. accepting deposits, advancing loans, and creating credit. Discounting of bills of exchange belongs to the category of advancing loans, and transfer of money is just a commercial facility.

Banks' role in capital formation. We know that capital formation is the crux of the problem of economic development. Our main problem, therefore, turns out to be how far and in what manner banks can help in this respect. By accepting deposits from the people, they can encourage the people to save. Banks are a secure place where savings can be kept. Where such security is not available, people generally work and earn as much as just suffices to provide them with the necessary requirements of life. When security of savings is assured by banks, people save and keep the savings with these institutions. It is not being argued here that people do not save anything at all if there are no banks. The point being stressed is that there is very limited saving in a community in which adequate banking facilities are not available.

Moreover, where there are no banking facilities, even the little that is saved is kept in the form of cash or jewelry. It is so because small sums of savings cannot be given the form of profitable investments. Banking system removes this difficulty. Banks not only encourage

savings, but also constitute the agency through which even small sums saved by individuals find their way to profitable investments. Individual savers' gain is the interest which they receive on their deposits. This is the inducement for them to act in a manner which conduces to economic development. For the more the savings take the form of investments in preference to hoarding in cash or jewelry, the more is the capital formation, and the faster is the economic advancement of the country.

Channelising funds according to priorities. Most of the underdeveloped countries have taken to the course of planned development. The purpose of planning is to bring about fast economic advancement. A system of priorities is an essential feature of it. Some industries have to be given special encouragement in preference to others. As banks are the leaders in advancing loans to the business community, they can be very helpful in implementing the planned system of priorities. Given the financial resources, banks can transfer some of them from those industries which stand low on the list of priorities to those industries which are high up. In addition, banks are the creators of finances. They are, therefore, in a special position to encourage those industries which are high up on the list of priorities.

Even when a country has not taken to planned development, banks can do a lot to speed up the process of its development. In giving financial accommodation, banks generally prefer producers to consumers, and those producers who have a greater chance to succeed to those who are less likely to be successful. All this is conducive to economic development. If, in addition, banks prefer to finance schemes which will create or promote industrial climate (e.g. provision of electricity) or which will strengthen industrial base, they will be playing an active role in bringing about fast economic development.

Implementation of price policies. Price system is an integral part of the economic life of today. It occupies a key position among the incentives and disincentives to production. The planning authority (or the monetary authority) of the country must have a definite price policy if it is to be successful in its aims. There are two aspects of price policy.

There is, in the first place, the question of general price level. If it falls, producers suffer losses and output and employment decrease. Economic advancement receives a severe jolt. On the other hand, if the general price level rises and the rise is fast or cumulative, there is the fear of a breakdown of the system. Capital is likely to flee the land, and in that case the economic system receives a severe shock. Thus the planning or monetary authority must ensure against these two evils. It must keep fluctuations in the general price level within limits. Now, as the banks are manufacturers of money, the duty of keeping the price level in check falls in their sphere. The Central Bank of the country may give the lead, but ultimately actual implementation of policy regarding price level has to be done by them. If they reduce their rates of interest and also make borrowing easy or less difficult, credits will

increase and the price level will rise (or a fall in it will be arrested). On the other hand, if they follow dear money policy and also make borrowing difficult, credits will contract and the general price level will fall (or a rise in it will be arrested).

The other aspect of price policy relates to sectional prices. Authorities might find it advisable to raise some particular prices and lower others. Here also the banking system can help. For illustration take the case of a particular commodity, say wheat. Suppose that its price has to be brought down or the rise in its price has to be checked. On instructions from the authorities, banks start squeezing credits advanced to wheat merchants. Some of them perforce have to dispose of their stocks and the purpose is achieved. Similarly if the price of wheat has to be raised or the fall in it arrested, liberal advances to wheat merchants will do the trick.

Thus an extensive, efficient, and sympathetic banking is an asset to the planning and monetary authorities of the country. It helps to implement their price policy which conduces to economic development of the country.

Conclusion. We find then that banks can foster economic development in many ways. They promote saving and help to convert hoards into investments. They are instrumental in implementing the policies of planning and monetary authorities in respect of prices as well as in respect of the system of priorities.

It is self-evident that an extensive banking system is more helpful than a limited one. One reason why savings in rural India have stood low and could not be mobilised for industrial purposes, is the absence of banking facilities in those areas. In fact, effectiveness of the banking system in implementing the price policy depends on what proportion of the economy comes under the influence of banking activity. However, it must be noted that much depends on the manner in which banks play their role. Sometimes apparently insignificant facilities may go a long way to produce effects. For instance, probably deposits can be sufficiently increased in India if cheque forms are printed in local languages. Many similar steps are essential if the banking system is to approach different sections of the community.

Further Readings:

1. Benham : *Economics* (2nd edition), Ch. XXII.
2. Sayers : *Modern Banking* (3rd edition), Ch. 9.
3. The Reserve Bank of India : *Functions and Working*, Ch. XI.
4. Radcliff Committee Report, Ch. IV.

CHAPTER XXXII

VALUE OF MONEY

MEANING OF VALUE OF MONEY

Intrinsic value. The term "value of money" may be employed to mean value of the contents of money. Employed thus, the term refers to its intrinsic value. When we say that a rupee coin is worth only four annas, we are speaking of the intrinsic value of money. For what we mean to convey is that if somehow rupee stopped to be legal tender, its metal contents would be worth four annas only. Evidently, currency notes have very low intrinsic value.

Market value or purchasing power. Economists generally use the term "value of money" to mean its market value. In this sense, the value of money is its purchasing power, that is the amount of goods and services *in general* which a unit of money can command. In the rest of this chapter we shall use the phrase "value of money" in this sense only.

It is usual to measure or express prices of goods and services in terms of money. Money is the common denominator for comparisons of their values. In what terms do we express the value of money? Evidently, we can do it only in terms of goods and services. But no single commodity, or group of commodities, is competent to indicate the value of money. It has, therefore, to be expressed in terms of all goods and services taken together. In the definition of market value of money we have italicised the phrase "in general". The importance of that phrase is now evident.

Value of money and price level. Value of money is its general purchasing power. The larger the quantities of goods and services which a unit of money can buy, the higher is its value and *vice versa*. When prices are low, a given sum of money can purchase more goods and, therefore, its value is high. Conversely, when prices are high, the same sum of money can command less goods and services and its value is low. Value of money is thus the reciprocal of the general level of prices. A rise in the latter is synonymous with a fall, and fall is synonymous with a rise, in the value of money. If the general price level doubles, the value of money is halved; if the former trebles, the latter is one-third of its original value, and so on.

As pointed out above, value of money refers to its command over goods in general and not over any particular commodity or commodities. In a period, when prices in general are rising, all prices do not rise equally. Some prices rise more than others. In fact some prices may not rise at all and some prices may actually fall. We must take into account all these facts to arrive at the conclusion in what direction the general price level, or the value of money, has changed and how much is the change.

MEASUREMENT OF CHANGES IN THE VALUE OF MONEY

Non-measurability of value of money. Can we measure the value of money? This question comes to be the same as another question: can we measure the general level of prices? If we can measure the general level of prices, the reciprocal of this measure will give the value of money. That is if the general level of prices is x , the value of money will be $1/x$.

Unfortunately, however, we cannot measure the general level of prices. The difficulty lies in finding out a unit of measurement and the difficulty is insurmountable. A price is always expressed with reference to a unit. Generally an appropriate measure can be found for a unit of a commodity, but there is no unit of measurement appropriate for goods and services *in general*. To be more concrete, we can, for instance, speak in terms of one cow, one yard of cloth, or one maund of wheat, and state their prices. But goods and services in general can neither be expressed as so many in number, nor as so many yards, nor as so many maunds, and consequently the general level of prices does not have any medium to be expressed in.

Measurability of change. There is one escape from the above difficulty. We may leave the question of measuring the value of money and attempt to measure *changes* in its value. This is possible because changes can easily be expressed as *percentages* without any reference to a unit.

Changes in the price level would be very easy to measure if all prices rose and fell equally. We could then take up any single commodity and find out the extent of change in its price which would also be the measure of the extent of change in the general price level. Even if all prices rose and fell together but unequally, we could know the direction of change from any single price. As it happens, all prices do not change equally, and it is not certain that all change in the same direction. We have, therefore, to employ a complicated method for measuring changes in the price level. It is known as the method of index numbers. Index numbers may in this context be defined as the numbers indicative of the comparative level of prices at different points of time (or places). Let us now proceed to study the method of forming index numbers.

CONSTRUCTION OF SIMPLE INDEX NUMBERS

The base year. Index numbers help to compare price levels. It is essential for comparison that there is a standard to compare with. The first step in the formation of index numbers, therefore, is to select a year, the price level of which is treated as a standard for comparison. Such a year is called the base year. It is usual to define a base year as a year of normal prices *i.e.* a year in which price level is neither high nor low. But to decide whether a price level is high or low means, once again, comparison. There is no single price level which is universally agreed upon as normal price level. Index numbers have been formed with 1900, 1913, 1927, 1939 and 1945, as base years and yet price levels in these years were very different. Thus if we define

base year as a year of normal price level, we needlessly land ourselves in a difficulty. It is preferable to define a base year as the year comparisons with which carry significance. For instance, we choose 1939 as the base year to study changes during and since the war. If we take 1948 as the base year, index numbers will indicate trends since independence. Similarly with 1951 as the base year, index numbers will measure changes during the period of planning.

The procedure. The method of constructing index numbers may now be described briefly.¹ Suppose, 1939 is the base year and 1943 is the year for which index number is to be constructed. A list of relevant commodities is prepared. Their prices in 1939 as well as in 1943 are ascertained. Every price in the base year, i.e. 1939, is then represented by one hundred and the corresponding representative number for every price in the year in question, i.e. 1943, is calculated.² Averages for the numbers thus obtained are struck. Average for the base year will, obviously, be hundred. The corresponding average for 1943 gives the index number for that year with reference to 1939 as the base year. Let us illustrate the procedure. Consider the following table³ :—

TABLE XXXIIa

Items	1939		1943	
	Price per unit	Representative number	Price per unit	Representative number
	Rs.		Rs.	
A	2	100	4	200
B	10	100	11	110
C	12	100	15	125
D	3	100	6	200
E	5	100	3	60
F	20	100	16	80
G	4	100	3	75
H	8	100	12	150
Total		800	1000	
Average		100	125	

1 The reader may find some difficulty in understanding the procedure from this description. The difficulty will resolve itself as he passes on to the illustration which follows.

2 It is customary to represent every price in the base year by 100. This facilitates calculation of percentage change. There will, however, be no material difference if every price in the base year is represented by unity and every price in the year in question by a corresponding fraction.

3 The whole table has deliberately been made unrealistic, because the purpose is to illustrate the method.

Price *per unit* of *A* is Rs. 2 in 1939 and Rs. 4 in 1943. As we represent the price in 1939 by 100, the corresponding representative number for 1943, is 200. Similarly price *per unit* of *B* is Rs. 10 in 1939 and Rs. 11 in 1943. The latter is represented by 110, as the former is represented by 100. Thus proceeding we find the representative numbers for prices of various commodities. Averages are then struck. The average for 1943 is 125, which shows that price level in 1943 was 25 *per cent* higher than in 1939.

WEIGHTED INDEX NUMBERS

Shortcoming of simple index numbers. We have explained the method by which simple index numbers are constructed. These index numbers attach the same importance to all items. But, in fact, different items are of unequal importance. Their relative importance is to be gauged from the purpose for which index numbers are constructed. Non-recognition of the fact of unequal importance robs simple index numbers of their usefulness as index numbers. Let us illustrate the point by considering the case of cost of living index numbers.

Let us imagine that there is a group of workers employed in a firm where there is a uniform wage rate of Rs. 100 *per month*. Further, suppose that every one of them is spending his entire income on two items only, call them *A* and *B*. Lastly, suppose that the income is divided between the two items in the ratio of 20:80. Let us now see how changes in prices affect their budgets and whether our simple index number really indicates this effect.

Suppose the price of *A* rises by 50 *per cent* while that of *B* remains unchanged. Our index number will be 125, for:

TABLE XXXIIIb

Commodity	Representative number before change	Representative number after change
A	100	150
B	100	100
Total	200	250
Average	100	125

Thus our index number indicates that the workers will be neither better nor worse off if their wages are raised by 25 *per cent*, *i.e.* to Rs. 125. On examination, however, we find that this is not correct. If every worker continues to consume the same quantities of *A* and *B*, the statement of expenditure will be as under:

TABLE XXXIIc

	Expenditure before the change Rs.	Expenditure after the change Rs.
On <i>A</i>	20	30
On <i>B</i>	80	80
Total	100	110

Thus actual rise in the cost of living is 10 *per cent* only. Simple index number gives an exaggerated view of the change. Similarly if the price of *B* rises by 50 *per cent* while that of *A* remains unchanged, simple index number will show a rise of 25 *per cent* while the actual rise in the cost of living will be 40 *per cent*.

Weightage. The discrepancy can be removed by attaching different importance to the various items in accordance with the place they occupy in the budget of the workers. The importance thus attached is called weightage. In the above example, item *B* is four times as important as item *A*. Its weightage will, therefore, be four if the weightage of *A* is one. Index numbers calculated on this basis are called weighted index numbers. In the above two cases, index numbers will be constructed as under :—

TABLE XXXII d

Item	Weightage	Representative number before change	Representative number after change	Weighted representative no. before change	Weighted representative no. after change
(1)	(2)	(3)	(4)	(5) (2 × 3)	(6) (2 × 4)
Case I					
A	1	100	150	100	150
B	4	100	100	400	400
Total Average				500 100	550 110
Case II					
A	1	100	100	100	100
B	4	100	150	400	600
Total Average				500 100	700 140

DIFFICULTIES OF CONSTRUCTING INDEX NUMBERS

Choice of items. Construction of index numbers presents many difficulties. The first of them lies in deciding upon the list of relevant items, (i.e. "the composite commodity representative of expenditure" of the group of persons under study). Tastes and inclinations differ from person to person. For instance, some like tea and others prefer coffee. Consequently budgets of the persons constituting the group do not tally. This difficulty can, however, be surmounted by a summation of the budgets of all the individuals or of a sample cross-section of them.

Choice of prices. Another difficulty is about prices. Individuals generally purchase for consumption at retail prices. But retail prices differ from store to store. Wholesale prices are easier to ascertain but they are irrelevant to cost of living. However, when it is made clear how prices for any series of index numbers were ascertained, the appropriateness, or otherwise, of such a series for any given purpose becomes obvious. It is then possible to make use of index numbers with necessary caution.

Changes in consumption. A really formidable difficulty arises when the character of consumption has undergone a change, so that the constituents of budgets at the two points of time differ considerably. Such changes arise on account of changes in tastes, environment, and prices. Two kinds of changes occur:

1. Quantities of some commodities used at the later date are less, of others more.
2. Some commodities which were used in the base year disappear from the budget of the year in question, and some new commodities enter.

Suppose the change in the character of consumption is only of the first type. Then the list of commodities is the same but their weightages in the two periods are unequal. And much can be said in favour of either set of weightages. If weightages are decided upon on the basis of the base year, the index number is called Laspeyre's index number. If weights are adapted to the pattern of expenditure in the year in question, we get Passche's index number.

When the change in the pattern of expenditure involves a change of the second type, the problem becomes almost insoluble. Composite commodity representative of expenditure in one year becomes irrelevant to the other year. Which composite is then relevant for index numbers, becomes difficult to decide.

SUGGESTIONS FOR SURMOUNTING DIFFICULTY OF CHANGES IN CONSUMPTION

Some solutions have been suggested for the difficulty caused by changes in consumption. None of these is completely satisfactory. Nevertheless, a study of them is instructive.

Marshall's chain method. Marshall's chain method assumes that changes from year to year are insignificant, so that they can be ignored.⁴ One year may be taken as the base year and the composite commodity relevant to it may, without any fear of serious divergence, be treated as composite commodity relevant to the next or second-year. Then composite relevant to the second year may be treated as relevant to the third year. Treating second year as base year, index number for the third year is found. This index number is then adjusted to the index number of the second year. Similarly we can proceed on. For instance, suppose a_1 , a_2 , a_3 , are the composites (lists of commodities) representative of consumption in years 1939, 1940, and 1941, respectively. Let the prices be as under:—

TABLE XXXIIe

	Composite	Year	Price (Rs.)
I	a_1	{ 1939 1940	40 60
II	a_2	{ 1940 1941	45 54
III	a_3	{ 1941 1942	40 50

Taking set of figures I and treating 1939 as base,
 index number for 1940 = $\frac{60 \times 100}{40} = 150$

Taking set of figures II and treating 1940 as base,
 index number for 1941 = $\frac{54 \times 100}{45} = 120$

But with 1939 as base year, index number for 1940 is 150. Hence with 1939 as base year,

$$\text{Index number for 1941} = \frac{120 \times 150}{100} = 180$$

Now, taking set of figures III and treating 1941 as base,

$$\text{Index number for 1942} = \frac{50 \times 100}{40} = 125$$

With 1939 as base year,

$$\text{index number for 1942} = \frac{125 \times 180}{100} = 225$$

The real difficulty with this method is that it assumes that small errors are not cumulative. Between any two successive years, change

⁴ Once again if description of the method is difficult to understand illustration which follows will be helpful.

in the pattern of expenditure may be small and hence ignorable. But as we repeat the process over a number of years, the degree of error goes on increasing. Thus price levels in two distant years may be the same, but if we calculate index numbers for them by this method, they are almost certain to come out unequal.

Keynes' direct method of comparison. A method suggested by Keynes is the method of direct comparison. He introduces the concept of similar persons. Two persons of equal sensitiveness are similar if they enjoy equal real incomes of utility, i.e. the utilities which they derive from their incomes are equal. This does not mean that they consume the same articles. Only aggregates of utilities of commodities, which they purchase, are equal.

Comparisons of purchasing power of money are the same thing as comparisons of money incomes of similar persons. For instance, suppose that in the year 1939, a person was enjoying a given real income of utility with a money income of Rs. 200 and that he, or another person of equal sensitiveness, enjoyed in 1943 the same utility with a money income of Rs. 500. Then treating 1939 as the base year, index number for 1943 is $\frac{500}{200} \times 100 = 250$. In other words, in 1943 price level was $2\frac{1}{2}$ times that in 1939.

This method is preferable when the character of consumption has undergone a substantial change. It also comes handy when a substantial proportion of expenditure is on non-standardised goods. But it is, at its best, a rough method. It is difficult to fix upon similar persons because there is no objective test available for the purpose.

Keynes' highest common factor method. Another method suggested by Keynes is the highest common factor method. In this method, lists of commodities constituting composites relevant to consumption in the two periods are drawn. Each list is divided into two parts. In one part are included quantities of various items which are common to the two lists. Call this part *a*. The other part of each list consists of items where there is a difference, call them *b*₁ and *b*₂. Now, part *a* is widened by finding in *b*₁ and *b*₂ such items as have equal utility and transferring them to part *a*. *b*₁ and *b*₂ are then ignored. Price of *a* in the two periods is compared to find index numbers. Consider, for instance, the following two lists which represent the consumption of a typical family in two years, say 1939 and 1943 (standard of living remaining the same):

TABLE XXXII

1939	1943
3 mds. of wheat	3 mds. of wheat
2 " " sugar	1½ " " sugar
1½ " " milk	2 " " milk
2 lbs. " tea	3½ lbs. " coffee

Now, 3 mds. of wheat are common to both the lists. This item will be included in a . Also, $1\frac{1}{2}$ mds. of sugar and $1\frac{1}{2}$ mds. of milk will be included in a . Now suppose that 2 lbs. of tea give the same satisfaction as $1\frac{1}{2}$ lbs. of coffee, and that the former cost less than the latter in 1939 but the latter cost less than the former in 1943. Then two lbs. of tea will be included in a of 1939 and $1\frac{1}{2}$ lbs. of coffee in a of 1943.

Finding out similar pairs of commodities and transferring them from b_1 and b_2 to a is the essential feature of this method. As many items are thus transferred as possible. a thus comes to represent the highest common factor in the two composites. Comparing the prices of a in the two years, we find the index number.

This method has its own demerits. The essential step here is the widening of sphere of a . This is done by fixing upon pairs of commodities which give equal satisfaction. But equal satisfaction to whom? After all index numbers are calculated in respect of groups of persons and not individuals. And within a group tastes differ. Once again, there is no objective test of finding out what quantities of two commodities will give equal satisfaction to a group of persons.

INDEX NUMBERS AND NATIONAL INCOME

Interrelation. It was pointed out in chapter X that changes in the value of money introduce complications into measurement of national income. National incomes in different years have not only to be expressed in terms of money value, but also, for purposes of comparison; they have to be deflated to a common level of prices. This deflation is done on the basis of index numbers. Hence problems of index numbers are also the problems of measurement of national income.

We have now seen that the main difficulty in the calculation of index numbers arises from changes in the pattern of consumption. We have also discussed the various solutions which have been suggested. A suggestion by Professor Hicks in respect of interpretation of changes in the national income deserves to be stated.

Hicks' suggestion. Take two years—year I and year II. Also, let national income be measured on the basis of expenditure by individuals and the government. Now, if increase in the aggregate expenditure is more than the rise in the index number, national income will have increased and *vice versa*. For instance, suppose the aggregate money expenditure in year II is twice the same in Year I. Taking year I as the base, if index number for year II is above 200, national income has decreased. And if it is below 200, national income in year II is greater than in year I. To be concrete, let index number for year II be 400. Then national income in year II is half that in year I. Similarly if it is 300, national income in year II is $\frac{2}{3}$ of the same in year I. So on and so forth.

That is not all, however. In computing index numbers, the question of weightage has to be decided. Shall we calculate weightages on the basis of expenditure in year I, or in year II? In

other words, shall we use the Laspeyre's index number or the Paasche's. As has already been observed, choice between the two is rather difficult. And the two methods may not yield the same results. Hicks' solution is as under :

1. If increase in aggregate money expenditure is more than the rise in Laspeyre's as well as Paasche's index number, national income has undoubtedly risen.

2. If increase in money expenditure is less than that in both the indices, national income has certainly decreased.

3. If aggregate money expenditure has increased, but the increase is less than that in one index and more than that in the other, it is not possible to say with certainty whether national income has increased or decreased.

QUANTITY THEORY OF MONEY

A theory, purporting to explain how value of money is determined, is found in the writings of David Hume and Jean Bodin. It was correctly assigned the name of quantity theory of money. In recent times, the original crude form has been sought to be refined. Consequently, two forms of it have emerged. For distinction they have been given the names of cash-transactions version and cash-balances version of quantity theory. The refinements introduced have rendered the name "quantity theory" inappropriate, though this name continues to be applied even today.

1. *Crude version.* Money by itself is not useful ; it is, therefore, not demanded for its own sake. It only represents purchasing power and, hence, is acquired to part with, sooner or later, in exchange for goods. Thus the purchasing power or value of money depends on two factors, *viz.* the quantity of money and the things to be purchased with it. Given the quantity of things to be purchased, the larger the quantity of money, the higher will be the prices in general and the lower will be the value *per* unit of money and *vice versa*. But having once mentioned the quantity of things to be purchased, the protagonists of this theory completely forget about it in the statement of the theory. Their version of the theory merely states that the value of money is inversely related to the quantity of money.

2. *Cash-transactions version.* Irving Fisher has been the most important advocate of the cash-transactions version of the theory.⁵ According to him, there are three determinants of the value of money ;

(a) the quantity of money in circulation ;

(b) its efficiency or velocity of circulation (or the average number of times a unit of money is exchanged for goods in a year) ;

(c) the volume of trade (or amounts of goods bought *per* year for money).

⁵ Our discussion of his version is based on chapter VIII of his book *Elementary Principles Of Economics*, 1912.

Their relation to the value of money—or, better, to the general level of prices—can be explained with the help of the equation of exchange.⁶ Let us start with a single transaction. Suppose an individual purchases 10 seers of cheese at 3 rupees *per* seer. In this transaction,

$$30 \text{ (rupees)} = 10 \text{ (seers of cheese)} \times 3 \text{ (rupees per seer)}$$

If we express all transactions effected in a given period in the same manner and then add them all together, we get an equation of exchange for the community for that period. The left hand side of the equation will then represent all the money spent and the right hand side will give the value of goods purchased in that period. The two must obviously be equal.

Let us take up the left hand side for further explanation. Money expenditure is not the same thing as quantity of money in circulation. This quantity is only one element of money expenditure. If a unit of money, during the period under consideration, is used ten times for making purchases, then total money expenditure is ten times the quantity of money. The number of times a unit of money changes hands during a period is called velocity of circulation or efficiency of money. Thus velocity of circulation is the rapidity with which money changes hands. If every person spends money as soon as he receives it, velocity of circulation is infinitely high. If, on the other hand, the recipients of money hold a part or whole of it for some time, then the larger the proportion they thus hold and the longer the period for which they hold it, the lower is the velocity of circulation. Velocity of circulation of money, thus, is in inverse relation to what Professor Chandler (after Wicksell) has called the "average interval of rest" of money between its receipt and expenditure.⁷

Total expenditure is thus a product of two factors,—the quantity of money in circulation and its velocity of circulation. If M is the quantity of money and V the velocity of its circulation, then expenditure is given by MV . Using algebraic language for the right hand side, let us suppose that quantities of commodities are represented by q_1, q_2, q_3, \dots and their respective prices by p_1, p_2, p_3, \dots then,

$$MV = p_1q_1 + p_2q_2 + p_3q_3 + \dots$$

Employing the greek letter Σ to represent the sum of these terms,

$$MV = \Sigma pq$$

If we use P as the average⁸ of all prices and T to represent the sum of quantities exchanged, then:

$$MV = PT, \text{ or } P = \frac{MV}{T}$$

6 Fisher defines the equation of exchange as "a statement in mathematical form, of the total transactions effected in a certain period in a community". *Ibid*, p. 152.

7 *An Introduction To Monetary Theory*, p. 35.

8 Weighted average, to be correct.

In other words, price level varies directly as the quantity of money (M), and its velocity of circulation (V), and varies inversely as the volume of trade (T). If we take into account the fact that not only state money but also bank money is used for transactions and that the velocity of circulation of the two kinds of money is generally unequal, then we can modify the above equation into the form:

$$P = \frac{MV + M_1V_1}{T}$$

where, P is the general level of prices,

M is the state money,

V is the velocity of circulation of M ,

M_1 is bank money,

V_1 is the velocity of circulation of M_1 ,

T is the number of transactions.

Considering the simpler equation $MV=PT$, it is very easy to show that it represents just a truism. MV represents the total expenditure of the community during a year. This expenditure is incurred to purchase goods.⁹ On the other hand, T represents goods purchased and P the price *per unit*. Hence PT is the total value of goods. In other words, the theory only says that value of goods purchased during a period equals the value of goods. Though a truism, yet the equation does bring out what factors determine the price level.

Two facts may be noted. First, there is not a fixed relationship between the quantity of money and the price level. For in addition to M , V and T are determinants of the price level. The price level may change as a result of any one or more of these three factors. Secondly, though Fisher did state that P varies in direct proportion with M if V and T remain unchanged, yet it does not mean that changes must always originate with M . M , V , and T are all determinants of price level and initially the process of change might start with any one of them.

3. *Cash-balances version.* Marshall is the author of the cash-balances version of the theory¹⁰. According to him, people find it worthwhile to keep a proportion of their income in the form of money (state money as well as bank money). Keeping a part of the income in the form of ready purchasing power has at once an advantage and a disadvantage. Advantage lies in the fact that possession of money makes purchases easy and smooth and enhances bargaining strength. Disadvantage arises from the fact that money is a barren, non-income-yielding asset, but if it is invested, it yields an income. Every individual

9 Of course, the term "goods" is used in a very wide sense and includes all goods, services, securities, shares, etc. In other words, all trade transactions as well as financial transactions are taken into account.

10 *Money, Credit and Commerce*, I, iv.

decides upon the appropriate proportion by weighing the advantage against the disadvantage.

"Let us suppose that the inhabitants of a country, taken one with another, find it just worth their while to keep by them on the average ready purchasing power to the extent of a tenth part of their annual income, together with a fiftieth part of their property, then the aggregate value of the currency of the country will tend to be equal to the sum of these amounts."¹¹

Two equations of exchange based on Marshall's statement of the theory will be considered. One has been given by Pigou and the other by Keynes.

(a) *Pigou's equation.* Let R be the real resources enjoyed by the community. Suppose that people, to provide themselves with convenience in purchases and security in payment, decide to keep a given proportion of R in the form of money. Call it k . Then kR measures the real resources which people have decided to hold in the form of cash. If M is the amount of money, then kR will measure the value of M . Now, if P represents *value per unit of money*, then,

$$P = \frac{kR}{M}$$

Further, account has also to be taken of the fact that money available to the public includes not only state money but also bank money against which cheques can be drawn. People keep a proportion of their command over purchasing power in legal tender and the balance in banks. Let c represent the proportion kept in legal tender. Then $(1-c)$ is the proportion which is kept as withdrawable deposits. Now, banks keep only a proportion of their liabilities in cash. Let this proportion be h . Then:

$$P = \frac{kR}{M} \left\{ (c + h(1-c)) \right\}$$

(b) *Keynes' equation.* The equation given by Keynes is comparatively simpler. According to him, it suits the people to have on hand some purchasing power. The amount of this purchasing power depends partly on their wealth and partly on their habits. Given the wealth and habits of the people, the amount of purchasing power which they desire to hold is given. This purchasing power can be measured in terms of what he calls consumption units. A consumption unit is "made up of a collection of specified quantities of their standard articles of consumption or other objects of expenditure."

Suppose people desire to hold k consumption units in the form of cash. Then the actual amount of money, call it n , will measure the value of k . Thus if p be the price *per* consumption unit, then:

$$n = pk, \text{ or, } p = \frac{n}{k}$$

Taking into account bank deposits, let us suppose that k' are the consumption units which people desire to keep in the banks. Let cash ratio of banks to liabilities be r . Then,

$$n = p(k + rk')$$

COMPARISON OF THE THREE EQUATIONS OF EXCHANGE

Let us juxtapose the three equations with a view to comparing them. We abstract from the operation of banks because our purpose is to compare the fundamentals. Also, as Pigou's equation is in terms of value *per* unit of money while the other two equations are in terms of price level, we convert Pigou's P into $1/p$ where p is the price level. The three equations will be:

$$\begin{array}{ccc}
 P = M \cdot \frac{V}{T} & p = M \cdot \frac{1}{kR} & p = n \cdot \frac{1}{k} \\
 \text{Fisher} & \text{Pigou} & \text{Keynes}
 \end{array}$$

Similarities. In all the three equations, price level is shown as directly varying with the quantity of money. Of course, Fisher makes use of the concept of velocity of circulation of money, which Marshall has characterised as not a wrong but a long way. This, however, does not mean that Fisher is taking account of certain factors which Cambridge economists ignore. While the former is stressing the medium-of-exchange function of money, the latter stress its store-of-value function. To Fisher demand for money arises from transactions. To Cambridge economists demand for money means the demand to hold money. Now, in a period of boom, people expect prices to rise sharp and fast. They, therefore, replace their stocks swiftly as they are exhausted. In fact people endeavour to increase their stocks. Thus people part with money swiftly; they do not hold it long. The interval of rest is short. Fisher would describe the situation by saying that velocity of circulation is high. Cambridge economists would say that demand for money is low. Fisher's V is high. Pigou's k is low and so is Keynes's k . Both descriptions lead to the same conclusion. *Ceteris Paribus*, when V is high, price level is high. Also, when Pigou's or Keynes' k is low, price level is high.

Superiority of Keynes' equation. Keynes rightly claims superiority for his equation. From his equation it is easier to find where monetary authorities can operate. The purpose is to regulate p . k lies outside the sphere of government control. But n and r can be controlled by the authorities. Even k' can be regulated by bank rate. Suppose the price level is to be kept constant. This can be done by effecting changes in n , r and k' , which offset changes in k .

Dissimilarities of the equations. Similarity in Fisher's and Cambridge equations, in that they establish a positive correlation between the quantity of money and price level, is more apparent than real. There is not one price level but a structure of interrelated price

levels, and Fisher's equation and the Cambridge equations refer to different price levels.

Let us first take Fisher's equation. He uses the concept of velocity of circulation of money. This concept has a meaning only in terms of transactions. Hence weightages of different items must be decided upon on the basis of transactions to which they give rise. In other words, the weightage of a commodity will depend on its price, its quantity exchanged and the number of times each unit, on the average, changes hands in a given time. P in Fisher's equation is, therefore, the reciprocal of what may be called cash transactions standard.

Now consider the Cambridge approach. Money kept by people with themselves and in the banks consists of savings and the sums for personal and business expenditures. The former may be called savings deposits and the latter cash deposits. Cambridge equations refer to cash deposits. These deposits are for use for a large number of personal and business purposes. Hence in price levels of Cambridge equations, weightages of items depend on purposes for which cash balances are kept. Evidently, then, here the price level is the reciprocal of cash balances standard.

Thus the price levels, to which the Fisher's and Cambridge equations refer, are different.

CRITICISM OF THE QUANTITY THEORY

Three points of criticism may be raised. First, there is a multiplicity of price levels, each one being important in its own place. Every equation of exchange relates to only one of these. Quantity equations, therefore, are useful instruments of enlightenment; they are not set formulas for tackling all possible situations. Secondly, quantity equations give only the immediate determinants of value of money. Its ultimate determinants must be traced if policies are to be properly conceived and applied. Lastly, quantity equations give rise to what is called quantity theory approach which stands discredited. We now consider these points in details.

1. THE RELEVANT PRICE LEVEL

Multiplicity of price levels. We have seen that various quantity equations refer to different price levels. Price level of Fisher's equation is all-inclusive, bringing within its orbit all things—goods, services, securities, shares, etc.—which are the subject of exchange. Price level of Cambridge equations refers to items for which cash balances are held.

There is in fact a multiplicity of price levels. Index numbers may refer to wholesale prices or retail prices, prices of consumer goods or investment goods, monopoly prices or competitive prices, prices of domestic goods or internationally traded goods. Also, wages have to be included in prices if labour is considered as one of the commodities.

Relevance of different price levels for different policies. What is exactly the price level we refer to when we speak of the purchasing power of money? Keynes mentions two standards—the purchasing power standard and the labour standard.¹² Purchasing power standard refers to the prices of consumer goods only while the labour standard to prices of wage goods. If the price level of consumer goods rises, value of money in the sense of purchasing power standard shall have fallen and *vice versa*. Similarly, if the price level of wage goods rises, value of money in the sense of labour standard shall have fallen and *vice versa*.

Keynes considers consumption standard as the purchasing power standard *par excellence*.¹³ He, however, does not give any reasons for this. Nor does he give any reason for his preference for labour standard. If the purpose of monetary policy were to always operate on the prices of consumer goods or upon the rate of wages (to raise, stabilise, or lower them), his choices could be commended. The fact of the matter, however, is that monetary authorities cannot always operate on any one given price level. Shifts in emphasis are unavoidable. Not only that. It may be found necessary to bring down one price level and simultaneously raise another. For instance, if there is an unhealthy speculative rise of prices in the share market and a simultaneous fall in prices of farm products, monetary policy will have to be so engineered as to curb the rise in the former and induce a rise in the latter. Thus every version of quantity theory refers to some general price level. But economic policy has often to operate on sectional price levels for which the theory affords no guidance.

2. ULTIMATE DETERMINANTS OF PRICE LEVEL

Quantity equations give us what may be called the immediate or direct determinants of price level. For instance, Pigou's equation tells us that price level depends on R, k, c, h , and M . Fisher's equation reveals that P depends on M, V, M_1, V_1 and T . If we trace the factors on which these variables depend, we shall have found the ultimate determinants of price level. Thus quantity equations provide us only the headings under which ultimate determinants of price level may be classified.

Variables in Pigou's equation. Pigou has attempted to enumerate the factors on which variables of his equation depend¹⁴. Take first of all R , the real income. It is synonymous with total output which depends on efficiency of the people. Individually their efficiencies might be increased by improving their health, strength, education and cheerfulness. Collective efficiency can be increased by inventions and discoveries.

12. *A Treatise On Money*, vol. I, p. 133.

13. *Ibid.*, p. 54.

14. *The Value Of Money, Readings In Monetary Theory*, pp. 162-183.

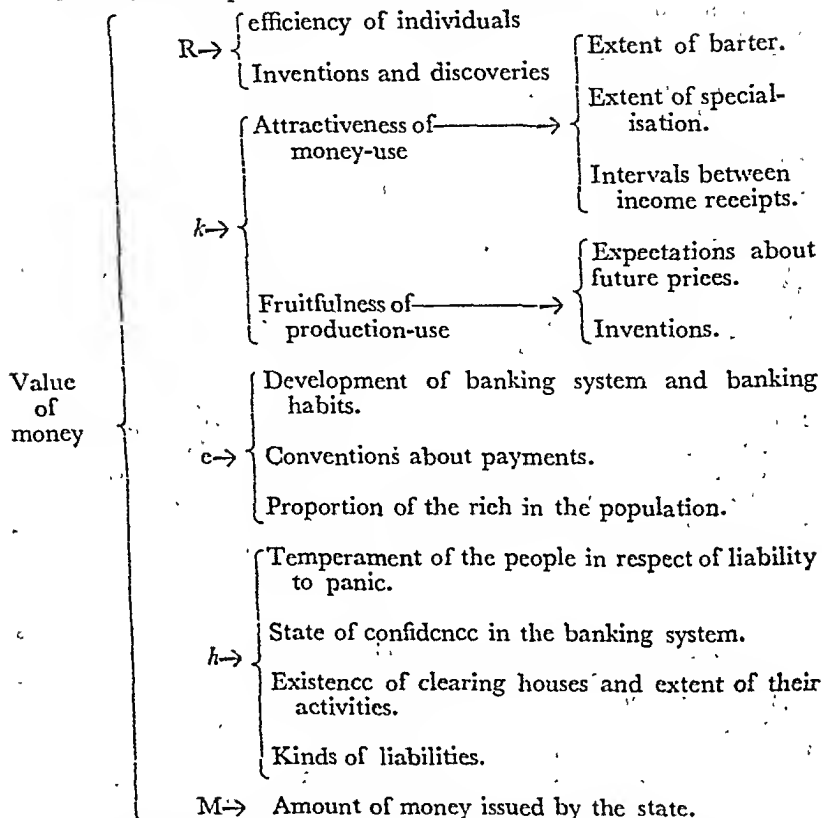
k is determined by three considerations. One is the convenience of holding purchasing power in cash for use. Another is the satisfaction which can be obtained by spending it on durable goods. The third is lending or investment. Real rivalry is between the first and the third, *i.e.* between money-use and production-use of resources. The fruitfulness of production-use is estimated by the future anticipations about prices. People prefer to hold less resources in the form of money when prices are expected to rise and *vice versa*. Also, inventions make investments more remunerative. The attractiveness of money-use depends on a number of factors. One is the proportion in which transactions are effected with or without the use of money. In underdeveloped countries many exchanges are effected by barter. In advanced countries factors, like cross trade between firms and the existence of clearing houses, tend to reduce the need for money, but specialisation in all forms tends to increase the requirements of exchange media. The other factor is the interval of time at which people receive incomes. The longer this period, the larger is the amount of money required to be held. It is on the basis of these two sets of considerations—one determining fruitfulness of production-use and the other determining attractiveness of money-use—that people decide how much resources they will keep in the form of money. The greater the promise of production-use or the less the importance of money-use, the lower is k , and *vice versa*.

c is the proportion of state money to bank money. It depends on banking habits, the stage of development of the banking system, conventions about payments to shopkeepers and others, and the proportion of the rich people in the community. Banking habits of the people and the stage of development of banking are interdependent. When people are not inclined to keep accounts, banking cannot expand. And people cannot keep accounts, unless there are banks. Hence advance on these two fronts goes together and as it proceeds, it reduces c . Similarly, when shopkeepers allow their customers to make payments after intervals, such payments are more convenient to make by cheques. If many people are rich, there will be more bank accounts and more payments by cheques. Both these circumstances, therefore, reduce c .

The next variable is h . In the first place it depends on the temperament of the people in respect of liability to panic. Secondly, it depends on the state of confidence in the banking system. Thirdly, existence of clearing houses and extension of their activities tend to reduce h . Lastly, if deposits with banks are those of foreigners or of those who are engaged in foreign trade, large withdrawals are likely every now and then. h will in that case be high.

Pigou does not discuss the factor M , but obviously it depends on policies of the monetary authority.

All this can be put in a schematic form as under :



Variables in Fisher's equation. Fisher was content to give a quantity equation and did not care to trace the determinants of variables on which price level depends. Let us make an attempt to enumerate their determinants.

First take the quantity of money. One determinant of quantity of money is state money issued by monetary authority. Now, a unit of state money with an individual is one unit of money and serves as such. But if the same unit of money is deposited with a bank, credit of a larger amount can be created against it. Hence the two other determinants of quantity of money are: the proportion of state money which people deposit with the banks, and the cash-advances ratio. These two are determined by the banking habits of the people and the general state of trust and confidence.

In a society where there are facilities for investing and borrowing, i.e. when the credit and financial system is well developed, people hold less idle money, both because they can lend or invest easily and because

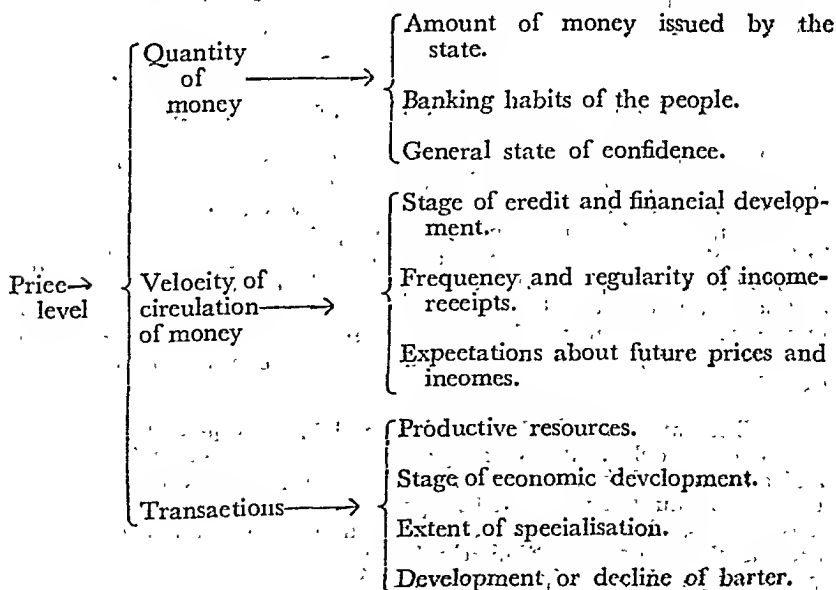
they can borrow whenever they require it themselves. This means that in such a society normal level of velocity of circulation of money is high. This level is also high if income-receipts are frequent and regular. The shorter the interval between successive income-receipts and the greater the stability of income-earnings, the less will be the idle cash held by the people. Velocity of circulation will be high.

The above factors determine the normal level of velocity in a society. There are, however, variations around this norm brought about by people's anticipations regarding prices and incomes. A rise in prices being synonymous with a fall in the value of money, people prefer to hold goods rather than money in a period of boom. Also, as they expect to receive large incomes in the immediate future, they are more inclined to spend away their present earnings. For both these reasons, velocity of circulation of money is high in a period of boom. Conversely, it is low in a period of depression.

T in Fisher's equation means the number of exchanges effected by money. The number and sizes of these exchanges depend on the level of output which in its turn depends on the extent of economic resources and the stage of economic development. The larger the volume of output, the higher, other things being equal, will be T .

The whole output is, however, not exchanged. The proportion of it which is exchanged, depends on the extent of specialisation. Also, a part of what is exchanged, is exchanged by barter. If barter declines, T tends to be higher.

All the factors given above can be put schematically as under :—



3. LIMITED APPLICABILITY OF QUANTITY THEORY APPROACH

Failures of quantity approach. The crude version of the theory related price level to the quantity of money only. The refined versions have shown that other variables are also involved. Yet the practical conclusion remains the same, viz. that the monetary authority can influence the price level and economic activity by changes in the quantity of money made available to the community. There have, of course, been many occasions when reductions in money supply have brought about a fall in the price level and increases in it have brought about a rise in it. Yet manipulation of quantity of money does not constitute a dependable method because it does not always produce the desired results. When depression is deep and pessimism and gloom pervade the business world, the government may adopt measures to make more money available to the public but the latter may not take it. Even if money is handed over to the people by purchase of securities, it mostly slips into hoards.

Alternative approach. Writings of Wicksell, Hawtrey and Keynes have made it clear that in a period of falling prices, what is required to be increased is not money but incomes and expenditures. Monetary policy will, therefore, be effective if it operates on incomes and expenditures of the people rather than on the quantity of money with them. This new approach has been called income-expenditure approach. We shall discuss the new approach in chapter XXXV. Here we need only point out that the new approach lays stress on steps to increase or reduce money incomes to regulate economic activity. The main factors with which this approach deals are output, consumption, saving and investment.

EFFECTS OF CHANGES IN THE VALUE OF MONEY

Effects on distribution of incomes and wealth. Let us remember that all incomes are prices—prices of services of individuals as well as of their properties. It should not be difficult to realise that if changes in the value of money affected all prices equally, these changes would be of little significance. For, in that case, every person's income would change in the same proportion as the prices of goods on which he spends and he would be neither better nor worse off. As it is, however, changes in the value of money influence different prices, especially different income-earnings, unequally and, therefore, have distributional implications.

There are first of all obligations and incomes fixed by contract. Examples are debts, interest charges on debts, rents of buildings, salaries and annuities. When value of money falls, i.e. when price level rises, the same amount of money debt represents less value in terms of goods and services. Hence the debtors benefit and the creditors suffer, when such a change occurs. Similarly the rentiers, the salaried people, the pensioners, and the recipients of annuities are sufferers when prices rise.

Contrariwise, fixed-incomists find their real incomes having gone up when price level falls.

Then there are incomes which change but not equally rapidly with the price level. Wages are the most outstanding example of such incomes. When prices rise, trade unions exert pressure on employers to raise wages. But some time elapses before their efforts bear fruit. Meanwhile the workers continue to suffer. And if prices continue to rise, wages continue to lag behind. This is why in periods of boom workers find it hard to make both ends meet. Conversely, employed workers gain from falling prices because wages do not fall equally rapidly.

Most volatile of all incomes are profits. They increase when prices rise and decrease when prices fall. Most of the costs—interest, rent, wages—are rigid; they lag behind when prices change. Hence in a period of rising prices, profits rise more rapidly than prices. Similarly when prices fall, profits fall faster.

Effect on production and employment. It is the entrepreneurs who decide whether more should be produced or less. If they decide to produce more, more equipment and workers are employed. On the other hand, if they decide to cut down their outputs, equipment is reduced and so is the number of workers.

Profits guide entrepreneurs in deciding whether they increase or reduce their outputs. We have already noted that profits are very volatile and change with changes in prices but more rapidly. Thus in a period of rising prices, profits rise fast providing an incentive to the producers to expand their outputs. Production and employment, both, increase. In a period of falling prices, on the other hand, profits fall swiftly. Production and employment fall to a lower and lower level.

A period which is marked by fluctuations in prices is a period of high degree of uncertainty. It becomes difficult to predict the future course of prices and demand. Only those, who are prepared to face heavy risks in the hope of earning high profits, continue to remain in business. Less venturesome entrepreneurs quit the field. Even those who remain behind may reduce risks by curtailing output. Total output, therefore, stands at a low level in such periods. Fluctuations in the internal purchasing power of money also produce fluctuations in foreign exchange rates, which enhance risks of foreign trade. Trade and output decrease as a result of it.

Workers adversely hit by all changes. It may be noted that to the labouring class as a whole neither rising prices nor falling prices are welcome. In a period of rising prices employment stands high but workers find the commodity-value of their money incomes gradually shrinking. On the other hand, when prices are falling, increasingly larger numbers find themselves thrown out of jobs every

day. Needless to add that a period of depression is more painful than a period of boom.

INFLATION¹⁵

Meaning of inflation. We conclude this chapter by a discussion of inflation.¹⁶ There have been periods in which monetary authorities, generally to finance deficits in the government budget, have issued more currency. As the currency thus issued was not in response to increase in production and trade, it produced rise in prices. The rise in prices increased requirements of money of the public as well as of the government. Still more currency had to be issued. This started a vicious spiral in which note issue, prices, costs, and monetary requirements rose and chased one another. Such periods have come to be known as periods of inflation.

Economists have sometimes defined inflation in terms of the factor which started the vicious spiral in such periods. In substance these definitions describe inflation as an expansion of currency and credit in excess of normal requirements. For instance, according to the Federal Reserve Board of U.S.A., inflation is "the process of making addition to credits not based upon a commensurate increase in the production of goods".

There have, however, been occasions when the rising trends were initiated not by an increase in the amount of currency but by a rise in prices. A rise in prices may start, for instance, as a result of rise in the prices of imports. Business firms then find their financial resources inadequate to meet their monetary requirements. They approach the banks for more credits. If the government does not issue more currency, there may be financial stringency. If it does, inflationary spiral may get set into motion.

It is thus proper to define inflation as a spiral of expansion of currency, rise in prices, and increase in monetary requirements, rather than in terms of any single cause which initiates the process. Rise in prices may succeed or precede the expansion in currency. As and when these changes begin to react on one another so that a rising spiral starts, inflation is in existence. Hence inflation is "a state of disequilibrium in which an expansion of purchasing power tends to cause, or is the effect of, an increase of the price level."¹⁷ Thus it is neither the increase in currency nor the rise in prices which by itself constitutes inflation. Inflation is a state of disequilibrium in which rise in prices and expansion of currency are chasing each other. Once the two have been adjusted to each other, inflation ceases to exist, even though the price level and the quantity of currency stand higher than where the process started.

15 The discussion, which follows is based mainly on Paul Einzig: *Inflation*.

16 Whatever is said about inflation is applicable, *mutatis mutandis*, to the anti-thesis of it, namely deflation.

17 Paul Einzig: *Inflation*, p. 22.

Causes of inflation. There are many factors which might start the inflationary spiral or might add to its momentum. Such factors are as follows:—

1. The quantity of money—state money or bank money—may increase. Increase in the quantity of money increases aggregate demand. This raises prices and the inflationary spiral might start. Similarly the initiative might come from an increase in the purchasing power. When incomes of the people rise or when people decide to spend more and save less, rise in prices is very likely. However, increase in purchasing power, to have this effect, must be financed by credit expansion.

Some people think that an increase in the velocity of circulation of money might also cause or aggravate inflation. But it must be noted that while an increase in the quantity of money is a cause of an increase in the demand for goods in general, increase in velocity of circulation is just another name for the increase in aggregate demand. Hence, while an increase in the quantity of money is a cause of a rise in prices, a rise in the velocity of circulation makes such a rise technically possible.

2. There may be a reduction in the requirement for money. This may happen when the population decreases. Less goods are produced and less are wanted. If the amount of money remains the same, price level rises.¹⁸

Similarly there may be a reduction in the volume of goods exchanged as a result of failure of crops or excessive exports. Over-investment and diversion of more resources towards producing capital goods increase incomes. Production of consumer goods does not rise correspondingly, therefore prices rise. Similarly in periods of war there is a decline in the goods available for citizens. Stock piling also works in the same direction.

With any one of these changes, price level rises. If this rise in the price level leads to expansion in currency and credit, inflationary trends may develop and gain momentum at every step.

3. Some other factors may also be mentioned. Inflation may be imported. When price levels in other countries are progressively rising, the country in question has to import goods at ever-rising prices. There is then a sympathetic rise in the prices of goods produced within the country and inflation may develop.

Devaluation, that is reducing the foreign exchange value of home currency, is also apt to lead to inflation. This is the result of many factors. Firstly, the prices of imports rise. Secondly, exporters make profits and their purchasing power increases. Thirdly, more goods are exported and less imported. Lastly, there is the psychological factor. People know that prices rise after devaluation and they begin to hold stocks. Aggregate demand and, hence, the price level rises.

18 Black Death is an historical case in point.

Increased taxation is, as a rule, disinflationary because it helps to reduce the purchasing power of the people. If, however, taxes imposed are on production and sale of necessities so that their incidence can be passed on to consumers, prices of these goods rise and may cause or augment inflationary tendencies.

Evil effects of inflation. Inflation implies a progressive rise in the price level. We have already seen that rising prices adversely affect those whose incomes are rigid or slow-moving, but raising profits as they do, they bring about expansion in production and employment. Mild doses of inflation are, therefore, welcome on many occasions. But none can hold any brief for inflation of a serious proportion.

Inflation, by raising prices, reduces exports and encourages imports. Gold stocks and foreign exchange reserves are adversely affected. As reserves of gold and foreign currencies are required every now and then to meet foreign obligation, their fall below a level is dangerous.

Inflation means continuous reduction in the value of money. When lenders find the value of their loans falling progressively, there is a tendency among them to invest abroad. Foreigners also begin to withdraw their funds from the country. There is thus a flight of capital which is too dangerous a phenomenon to be overlooked.

History bears testimony to the fact that periods of rising and falling prices have succeeded each other. Some economists are inclined to believe that the intensity of a depression is proportional to the intensity of the boom which precedes it. Hence if prices rise very high, in reaction they will fall very low, causing widespread and intense suffering and misery.

Remedies of inflation. There are many methods by which inflationary spiral may be curbed. These methods are not exclusive to one another; they are complementary.

There are first of all the monetary methods. These are *bank rate* policy, open market operations, fixing minimum cash ratio for banks, and qualitative methods of credit control. We propose to study these methods in the next chapter. Here it may suffice to say that these methods may not by themselves achieve the purpose but are good supplements to other methods.

Secondly, there are physical controls. These may take the form of price controls so that prices of "strategic goods" are frozen at some level. Additional purchasing power then becomes ineffective. Experience shows that price controls are effective only if scarce goods are properly rationed among the people. Rationing of essential raw materials may also accompany price controls. Physical controls may also take the form of compelling firms to produce more of consumer goods in preference to producer goods.

Last category consists of fiscal measures. These may take various forms. Taxes may be increased in such a manner that prices do not rise as a result of them and purchasing power with the people is reduced. Similarly the government may reduce its expenditure so as to create less incomes. Surplus budgets, obviously, mop up purchasing power. And, finally, tax structure may be so changed as to encourage people to save in preference to spending.

Further Readings :

1. Keynes : *Treatise on Money*, Vol. I, Chs. 6, 8, 10, and 14.
2. Fisher : *Elementary Principles of Economics*, Ch. 8.
3. Chandler : *An Introduction to Money*, Chs. 2 to 4.
4. Paul Einzig : *Inflation*.
5. A.E.A. : *Readings in Monetary Theory*, pp. 156-183.
6. Kortweg and Keesing : *A Textbook of Money*, Ch. 3.

CHAPTER XXXIII

CENTRAL BANKING

WHAT IS A CENTRAL BANK

Almost every reasonably advanced country has a banking institution known as its Central Bank. In India we have the Reserve Bank of India. The Central Banks of England, France and Sweden are respectively Bank of England, Bank de France, and Riks Bank.

Nowadays, almost every Central Bank is given the sole right of note issue. It also serves as a banker to the government. These activities as well as its dealings with other banks provide a good scope for making a profit. And it does make a profit. But profit making is neither the sole nor the chief aim of a Central Bank. Its chief purpose is to ensure that the monetary system is handled in accordance with the economic requirements of the country. Other functions of it are either the offshoots of this function or are subsidiary to it. It is, therefore, in terms of this function that a Central Bank may be defined. A Central Bank is an institution which is charged with the task of carrying out monetary policy of the government.

BUSINESS OF A CENTRAL BANK

There are two fronts on which monetary policy operates. One is the exchange rate. The operations of a Central Bank in respect of foreign currencies and foreign exchange rate constitute its "external business." The other front is the money supply to the public. As the Central Bank of a country is the ultimate source of cash for the private sector, it can influence the quantity of money made available to the public. Regulation of money supply constitutes the "domestic business" of the Central Bank. In respect of its domestic business, it operates as the sole source of note issue, and serves as a banker to the government as well as the member banks. We now propose to throw some more light on these operations of a Central Bank.

External business of a Central Bank. The Central Bank of a country holds a large part of the country's reserve in foreign exchange as asset against currency issued, so that confidence in currency is maintained. But to possess foreign exchange to back up currency is not enough. There should be a spare amount of it, sufficient to meet *net* foreign obligations as and when they arise.

It is the duty of the Central Bank to ensure stability of foreign exchange rate. If exchange rate is free to move with changes in supply and demand, it is expected to vary its policies from time to time in accordance with changes in the situation. It purchases foreign

currency in case the exchange value of domestic currency tends to rise, and *vice versa*. If the country is on the gold standard, or has otherwise adopted the policy of a fixed exchange rate, it is for the Central Bank to maintain the rate. In that case, it is expected to purchase and sell foreign currencies at fixed rates. In India there is an obligation on the Reserve Bank to purchase and sell sterling at the rate of 1s. 6d. to a rupee.

In case there is exchange control, the demand for foreign exchange is kept within limits. The obligation to purchase and sell foreign exchange at a fixed rate still continues. That is the Central Bank still continues to shoulder the responsibility of regulating exchange rate.

The obligation to maintain the exchange value of domestic currency is a part of the Agreement clauses of the International Monetary Fund. Its members must ensure that the exchange value of their currency does not move, in either direction, by more than one *per cent* from the *par* values declared by them. The Central Bank of every member country undertakes to fulfil this obligation.

If the country is a member of the Sterling Area, then its Central Bank remains in constant touch with the Bank of England. The purpose is to ensure "similarity of approach." It is in consultation with the Bank of England that arrangements to settle accounts with the non-sterling countries are decided upon.

The Central Bank endeavours to maintain stability in the exchange value of the domestic currency, because this stability promotes international trade, and national well-being is closely bound with it. Of course every purchase of foreign currency by the Central Bank puts more domestic money in circulation (and every sale reduces liquidity), yet this is an incidental effect. Purchases and sales of foreign currency are done for the maintenance of exchange rate, and not for influencing liquidity for which usually other methods are preferred.

Internal business of a Central Bank. As we have already pointed out, internally the Central Bank functions as the sole source of note issue, and as banker to the government as well as to the member banks.

(a) *The right of note-issue.* In almost every country, where there is a Central Bank, it has been given the sole right of note-issue. This ensures uniformity in the currency. It makes it easier for the government to supervise, control, and direct note-issue. It also makes it feasible to declare notes in circulation as legal tenders.

The right of note-issue is regulated by law. In every country the rule is that every note issued must be covered by an asset of equal value. The assets which cover the note-issue consist of domestic standard money, government securities, foreign securities and gold. Up to the end of the Second World War, it was a universal practice to link up note-issue with the reserves of gold and foreign currencies and securities. Two alternative systems were in vogue, namely the method of fiduciary issue and the proportional reserve system. The former

was adopted in England. A certain fixed amount of notes was permitted to be backed by assets other than gold. This was the fiduciary issue. The balance of notes had to be backed one hundred *per cent* by gold. The maximum supply of notes was thus dependent on the gold reserves of the Bank of England. Proportional reserve system was more common. In this system a percentage was fixed, below which gold and foreign currencies backing the note-issue could not fall. For instance, the Reserve Bank of India Act provided that gold and foreign securities must be at least 40% of the total note-issue and that gold and gold coins must be worth at least Rs. 40 crores.

It is now widely agreed that the principle of linking note-issue to gold reserves is a relic of the time when many countries were on the gold standard. In the context of present-day conditions, it can have little meaning. It is also agreed now that there is no sense in linking note-issue with the reserves of foreign currency. After all, holdings of foreign exchange are meant to meet emergencies of the balance of payments and not to cover note-issue.

Consequently the relevant legal provisions have been modified appropriately in many countries. In England, the Act of 1954 has fixed a maximum (£1575 million) upto which notes can be issued. Any excess over it can be issued only by a special sanction. In India, the statutory provision regarding foreign exchange backing the note-issue has been cancelled. Only the gold reserves must not fall below the value of Rs. 115 crores. Thus the proportional reserve arrangement has been changed into minimum reserve arrangement.

(b) *Banker to the government.* The Central Bank of a country renders all those services to the government—Central as well as of the component states—which a bank renders to its customers. It holds its balances, and makes collections, disbursements and remittances on its behalf. It may also make arrangements for these facilities to the government at places where the Bank does not have a branch of its own.

A very important service rendered by the Bank to the government is to provide short-term finance. This is done by what are known as Ways and Means Advances. The period for which such advances are made vary from one week to three months. The rate of interest charged is also reasonable—in no case more than the *Bank Rate*, but usually one *per cent* below it. And these advances are granted without any collateral.

Ways and Means Advances are meant to meet relatively small and temporary requirements. A more reliable source, when amounts involved are large, are Treasury Bills. The Central Bank sells Treasury Bills on behalf of the government every week. Some special buyers may be given such Bills even in the course of the week. The sale of Treasury Bills—its increase, decrease, or stoppage—is undertaken to serve four purposes; namely,

(i) to meet the current financial requirements of the government,

- i.e.* to adjust the inflows to outflows of money in the account of the government ;
- (ii) to provide the governments of states, semi-government bodies, and foreign central banks with facilities to invest their short-term funds ;
 - (iii) to adjust the money supply to the private sector in accordance with its requirements ;
 - (iv) to control the structure of interest rates in the country in accordance with the government policy which normally aims at stability in interest rates ; but, when the situation demands, to cause variations in them by appropriate changes in money supply.

The Bank manages long term finance of the government by the sale of securities. It not only sells securities and makes payments on maturity on behalf of the government, it also underwrites the securities which remain unsold and then gradually unloads them in the market in course of time. The Bank, in addition, purchases securities which are approaching maturity. It so regulates its sale and purchase of securities as to smooth out possible disturbances in the supply of, and demand for, funds in the private sector.

Lastly, the Bank acts as an adviser to the government. It guides the government in securing the best possible terms in respect of Treasury Bills and securities. Moreover, various organs of the government look to the Bank for expert advice on financial problems.

(c) *Banker to banks.* Relation between the Central Bank and the member banks of a country is a two-way affair. On the one hand, the Central Bank is empowered to supervise the working of the member banks and to impose some obligations on them. On the other hand, it promises to extend to them, directly or indirectly, financial accommodation, as and when required.

Every member bank keeps a balance with the Central Bank. Such balances are known as *bankers' deposits*, and are treated as equivalent to cash for calculating the cash-deposits ratio. The banks use their *bankers' deposits* for mutual clearing of accounts, *net* debtors making payments by cheques on the Central Bank to *net* creditors. As, however, cash ratio must be kept within the safe level, *ultimately* these payments have to be made out of other assets.

The Central Bank imposes certain conditions on the member banks to ensure sound banking. Thus in England the London clearing banks must maintain 8% cash-deposits ratio, which is the *officially agreed* one. Similarly, their liquidity ratio must not fall below 30%. This the bankers themselves consider proper. The Governor of the Bank of England reserves to himself "the right to make observations" if there is any considerable divergence.

In India the Reserve Bank ensures sound banking by a variety of

measures. First, only those banks are issued a licence which promise to work on sound lines. Second, there is a statutory provision linking the area of operation with paid-up capital. For instance, a bank, operating in more than one state and having branches in Bombay and Calcutta, must have a paid-up capital of not less than ten lakh rupees. Third, the banks must keep aside—generally with the Reserve Bank—cash to the level of 5% of their demand liabilities and 2% of their time liabilities. Fourth, a bank must keep twenty *per cent* of its total liabilities in India in the form of cash, gold, and unencumbered securities. Fifthly, a bank has to transfer 20% of its profit to the Reserve Fund till it equals the paid-up capital. Lastly, the Central Bank controls branch expansion of the member banks.

The Central Bank of a country is generally empowered to obtain information and make recommendations. Some information is regularly supplied by the banks. For instance, in India every bank regularly sends weekly as well as six-monthly statement of its accounts to the Reserve Bank. The latter can call for any other information, or send one of its officers to inspect accounts. Generally, the recommendations of the Bank are accepted and carried out by the member banks. Even otherwise, the Central Bank is either empowered or can be empowered by the government to direct a bank to behave in the manner in which the Central Bank deems proper. The power of direction has to be used rarely. So, in effect, the Central Bank remains an effective adviser of the member banks.

Seen in its true light, the advice rendered by the Central Bank is a privilege. Another privilege arises from the fact that the Central Bank is to member banks the lender of the last resort. Arrangement differs from country to country. We briefly give the arrangement in India and in England.

The Reserve Bank of India Act 1935 provided that the Reserve Bank could rediscount Treasury Bills and usance bills of certain description. It could advance loans against such bills as well as against government securities and precious metals. Upto January 1952, however, the sole method, by which banks could get financial accommodation from the Reserve Bank, was loans against government securities. Since then, with a view to developing a bill market in India, advances are made against usance bills also. As yet the Bank has not started the practice of rediscounting bills. It must be noted here that in respect of loans and advances it is the Central Bank which decides the kind of collateral and the rate of interest.

In Great Britain, the Bank of England does not directly deal with the banks. It gives rediscounting facilities to discount houses. These institutions specialise in discounting bills and the like of them do not exist in India. Discount houses are financed by the banks. Whenever banks need more cash, they call back loans from discount houses. The latter then get bills rediscounted from the Bank of England. Thus funds flow from the latter to the member banks through the discount houses.

The rate at which the Central Bank discounts first class bills is called the *bank rate*. In England the *bank rate* is higher than the market rate of discount. Discount houses, therefore, approach the Bank of England only when they are hard pressed by the banks because getting bills rediscounted involves a loss. Hence it is only in times of monetary stringency that the discount houses approach the Bank of England. Such a situation is described by saying that *the market is in the Bank*.

The situation in our country is different from the same in England. Here the market rate of discount is higher than the *bank rate*. The banks in India make a profit on loans received from the Reserve Bank. This is an important difference.

(d) *Miscellaneous*. Three more things must be mentioned regarding the business of Central Banks. First, the Central Banks of most of the countries have an important part in maintaining relations with the international financial institutions. For instance, in close cooperation with the finance departments of their respective countries they deal with the International Monetary Fund, International Bank for Reconstruction and Development, and the like.

Secondly, the Central Banks are expected to collect important statistics and disseminate knowledge of them among the public. For instance, the Reserve Bank of India collects data on the operations of banks; on balance of payments, company and government finances, prices, etc. etc. It then publishes these figures in its monthly bulletins as well as a number of annual reports.

Thirdly, to their traditional task of controlling credit is now added the task of appropriately aiding in the economic development of the country. They must adopt measures for the spread of banking facilities to unpenetrated areas and uncatered fields of economic activity. Their monetary policy must be in accord with the requirements of economic development.

EXECUTION OF MONETARY POLICY

We have defined a Central Bank as an institution which executes monetary policy of the government. This is its most important function. Monetary policy operates either on the exchange rate or on prices within the country. The two fronts are not independent of each other. A fall in exchange rate ultimately leads to a rise in prices, and *vice versa*. Similarly a purchase of foreign exchange increases money supply with the public and tends to raise the price level. On the other hand, an increase in the quantity of money and the consequent rise in the price level tend to lower the external value of the currency, and *vice versa*. Thus violent fluctuations on the exchange front shake internal stability also, and violent changes in the internal price level shake external stability also. Nevertheless, monetary policy may operate either on the exchange rate or on the internal price level.

Regulation of exchange rate. Suppose the country has accepted the

policy of fixed exchange rate. The rate is maintained at the fixed level by the Central Bank undertaking to purchase and sell foreign exchange at that rate upto unlimited amounts. As there is an unlimited purchaser of foreign currency, its value cannot fall. Similarly, as the Central Bank is always prepared to sell foreign exchange at the fixed rate, no body will purchase it at a higher rate and its value cannot rise.

When the Central Bank desires to change the exchange rate, it adopts the new rate as its official rate. As it is now a ready buyer and seller of foreign exchange at this new rate, this rate comes to prevail in the market.

Even if exchange rate is left free, the Central Bank can always influence it by entering the exchange market. When it finds that the value of foreign exchange is tending to rise, it may enter the market as a seller. Similarly if the value of foreign exchange is tending to fall, it may enter the market as a purchaser. This is how the stability of free exchange rate is maintained. In case it intends to bring about a change in the exchange rate, it enters the market as a big buyer or seller, as the case may be.

Thus the manner, in which exchange rate is kept stable or is changed in the desired direction, is rather easy to understand.

Control of credit. The more important role of the Central Bank lies in maintaining price stability, or in bringing about changes in it when such changes are considered desirable. Changes in the price level are eliminated, as well as brought about, by appropriate adjustments in aggregate demand. Now, aggregate demand arises from incomes, disposal of capital assets, and borrowing. In other words, the source of aggregate demand are money receipts of the spenders (from current and capital resources) and advances or credits extended by financial institutions, especially banks. The Central Bank can make its policy effective by operating on such advances. When aggregate demand (and hence the price level) is sought to be raised, steps are taken which lead to extension in lending by banks (and other financial institutions). On the other hand, when price level is to be lowered, steps are taken to curtail lending by banks.

Lending by banks depends on their lending capacity, which is another name for the liquidity position of the banks. Of course, banks have to maintain a cash-deposits ratio and every variation in their holding of cash changes their capacity to lend. With larger cash reserves they can lend more, and *vice versa*. But cash can be always readily obtained if the banks possess adequate liquid assets. It is, therefore, liquid assets which are the limiting factor upon advancing credits. Thus if the Central Bank desires to effect a change in the quantity of advances, it can do so by appropriately influencing liquidity position of the banks. An increase in the liquidity of assets enables the banks to lend more. Similarly if liquid assets are converted into illiquid assets, the capacity of the banks to extend credits decreases.

Evidently, it is the composition of assets of the banks which is important. For instance, if banks in England are induced to replace their holdings of Treasury Bills by government bonds of long maturity, their liquidity ratio will fall and their lending capacity will be reduced. Similarly replacement of bonds by cash or bills increases liquidity, and the lending capacity of the banks becomes greater.

The supply of money is an important factor in determining aggregate demand. It is an important factor because on it depend the cash holdings of individuals, firms, and banks. Thus supply of money is a determinant of the liquidity position of the economy. But it is just one factor in the wider structure of liquidity of the economy. A spender's capacity to spend does not depend only on his holdings of state money and his bank deposit. It also depends on his holdings of liquid assets, i.e. assets which can be readily converted into cash. In addition, his capacity to spend depends on how much he can borrow. And, as we have stated above, the extent to which banks and other financial institutions will lend depends on their liquidity position. Thus it is the liquidity position of the whole system, and not the supply of money to the public, which determines aggregate demand.

The whole position may be summarised as follows: To regulate internal price level, the Central Bank must regulate spending capacity (on consumption as well as investment) of the public. In other words, funds which become available to the public have to be controlled. Of the aggregate funds on which the public can lay hands, bank advances are the portion on which the Central Bank operates. And the requisite variations in bank advances can be brought about by appropriate changes in the liquidity position of banks. Hence liquidity position of banks is the central piece of control by the Central Bank.

WEAPONS OF CREDIT CONTROL

There are a number of methods by which the lending capacity of banks may be influenced. These methods have been called weapons of credit control. They include *bank rate policy*, open market operations, variations in compulsory deposits and cash ratio, selective control, and moral suasion. These may now be explained.

Bank rate policy. We have seen that the Central Bank of a country provides to commercial banks facilities for loans and for rediscounting bills. The rate, at which the Central Bank is prepared to rediscount first-class bills, is called the *bank rate*. In a country like India, where the Central Bank does not extend rediscounting facilities but is prepared to advance loans against bills and securities, the rate at which the Bank advances loans is, for all practical purposes, the *bank rate*.

There are two possible effects of variations in the *bank rate*. One is called the interest incentive and the other is called liquidity incentive.

A. Interest incentive. As the Central Bank is the institution to which commercial banks look for financial accommodation in the last resort,

variations in the *bank rate* produce variations in the structure of rates of interest of the commercial banks. Suppose, for instance, that the *bank rate* is raised. As the commercial banks can now borrow dear, they will also lend dear. The price of loans having risen, borrowers will borrow less. Similarly a fall in the *bank rate* will lower the lending rates of commercial banks and more will be borrowed from them. The effect of a change in the *bank rate* on the demand for bank advances is called interest incentive.

How do changes in the lending rates produce effect on the demand for bank advances. Three views may be stated here.

1. According to Hawtrey, banking organisation influences the business activity through variations in the short-term rates of interest. One of the chief guiding principles for the banks being maintenance of high liquidity, they generally advance only short period loans and their clientele comes mostly from merchants, *i.e.* those who are engaged in trade and commerce. Variations in the rate of interest influence the stocks of merchants. How much stock will a merchant keep at any given time? Keeping a stock ensures his position against variations in demand as well as supply. Against this convenience of holding a stock, he must weigh the cost of doing so. If the merchant borrows money for the purchase of stock, he has to pay interest on it. If he provides the money himself, he foregoes the interest which he could have earned on it. This interest is an important element in the cost of holding stock. Hence when banks raise the rate of interest, the cost of holding stocks rises and, therefore, merchants are inclined to reduce their stocks, and their demand for bank advances decreases. Similarly, when the rate of interest falls, they may increase their stocks and their demand for bank advances increases.

2. Keynes holds a different view. There is no doubt that banks are, as a rule, suppliers of short-term loans only and, therefore, their rate of interest pertains to short-term finances. But when they vary their rates of interest, their actions go much farther because there is an intimate connection between short-term and long-term rates of interest. A pronounced variation in the former almost invariably leads to a change in the long-term rate in the same direction. This is so because short-term finances compete against long-term finances. If short-term rates are lower than long-term rates, people approach their lenders for repeated short-term loans for financing long-term projects. This shift of demand equalises the two rates. Similarly if short-term rates are higher, borrowing shifts from short market to long market till the two rates become equal.

Every producer has a number of schemes of capital extension which are kept pending for want of funds. In fact, it is not want of funds as such which is responsible for their not being carried out. The real reason is that these schemes are not considered to be remunerative at the rate of interest which has to be paid on the finances required. When the rate of interest falls, many schemes which were not considered worth undertaking at the old rate are now considered to be remunerative.

Decisions about new capital extensions depend upon the rate of interest. Even replacements of plants which wear out are determined by it. Thus rate of interest is an important determinant of demand for capital investment and, hence, of borrowings from banks.

3. *View of Radcliff Committee.* Radcliff Committee point out that interest rate is only one of the determinants of the size of stocks as well as of capital investment. Businessmen rely more on their expectations regarding future prices than on interest rates. Their demand for funds is interest-inelastic. Similarly the plans of the industrialists for expansion are more affected by expectations regarding prices than by considerations of interest rates, therefore their demand for funds is also interest-inelastic. The Committee maintain that only demand for funds for purposes of house building and public utilities is interest-elastic, but these activities now mainly belong to, and are increasingly being shifted to; the public sector. They conclude that the demand of the private sector for funds may be treated as interest-inelastic for all practical purposes. And their conclusion is based on adequate evidence.

B. Liquidity Incentive Thus variations in rates of interest produce little interest incentive. But they are very effective on the other front, namely liquidity incentive. A rise in the rates of interest reduces the prices of securities and thus penalises their sales. It also makes rediscounting of bills as well as securing financial accommodation from the Central Bank more costly. In all these ways liquidity of the assets of banks is reduced and they are in a position to lend less. Moreover, in some cases, it may be found difficult to raise the rate of interest charged. This stickiness of the rate of interest further reduces their ability as well as willingness to lend. Contrariwise, a fall in the bank rate lowers the structure of the rates of interest and thereby strengthens their liquidity position and induces them to increase advances.

We may remind ourselves once again that the main factor to be operated upon is not the cash base of the banks but their whole liquidity position. It is, therefore, the structure of interest rates rather than the supply of money which demands attention of the Central Bank. Commercial banks have to be tackled not as custodians of bank money, but as the most important source of loans. The object of influence must be bank advances rather than bank deposits.

Open market operations. Open market operations refer to sale and purchase of government paper—government bonds and Treasury Bills. Such sales and purchases influence liquidity position of banks.

When the Central Bank aims at stepping up bank advances, it enters the market and purchases government bonds. The sellers of these bonds receive payments in cheques drawn by the Central Bank on itself, and deposit these cheques with their own banks. Consequently, there is, on the one hand, an increase in deposits of the public with the banks and, on the other, an increase by the same amount in bankers' deposits. Evidently the cash-deposits ratio of the banks rises. Liquidity position of the banks now permits them to make larger advances.

ces. For instance; suppose Central Bank purchases securities worth one crore rupees which are deposited with the banks. The *bankers' deposits* having gone up by one crore and their liabilities also by one crore, the banks are in a position to create additional credits. Thus purchase of bills and government bonds by the Central Bank raises liquidity ratio of the banks. Quite similarly, if the Central Bank sells such papers, liquidity ratio of the banks is lowered and they have to reduce advances to the public.

In case securities purchased by the Central Bank are sold to it by the commercial banks, assets of the latter become more liquid. For their holdings of government securities are replaced by *bankers' deposits* to the extent of their sales. As government securities are not included in liquid assets but *bankers' deposits* are, the liquidity ratio of the banks rises and they are in a position to increase advances. Contrariwise, if the Central Bank sells securities and they are purchased by the commercial banks, liquidity ratio of the banks falls and they reduce their advances.

Sometimes liquidity position of the banks is influenced by a double action. The Central Bank may purchase government bonds and simultaneously sell Treasury Bills. In effect this means replacement in the assets of banks of bonds by Treasury Bills. In other words, liquidity of the system is increased and aggregate demand rises. Similarly, a simultaneous sale of government bonds and purchase of Treasury Bills reduces liquidity of the system and thereby brings down aggregate demand.

Variations in compulsory deposits and liquidity ratio. The Central Bank may fix a minimum liquidity ratio for the banks. Whenever it is desired to reduce advances, this minimum may be raised. A higher liquidity ratio means that given liquid assets can support less advances. Thus the banks find that they must reduce advances. They, therefore, make their loans less attractive by raising the rate of interest or by other measures.

The same results would be produced by raising the proportion of liabilities which the banks must keep with the Central Bank. If a larger proportion has to be kept with the Central Bank, it means that less liquid assets are available to meet obligations.

The weapon of fixing a compulsory level of liquidity ratio can work only in one direction. It is possible for the Central Bank to fix a minimum liquidity ratio. By raising this minimum, the power of member banks to make advances can be reduced. But it is not practicable to fix a maximum liquidity ratio. The Central Bank cannot forbid banks from being more liquid. For to ensure that there is enough liquidity in the assets of the banks is the duty of the banks themselves. If the Central Bank fixes a maximum liquidity ratio which the banks themselves consider inadequate, then the Central Bank can enforce its orders only by taking upon itself the responsibility for their solvency which no sensible authority would do. Hence while credits can be

contracted by compelling the banks to keep a high liquidity ratio, it cannot be expanded by compelling them to keep a low liquidity ratio.

Selective control. In recent years, there has been a tendency to employ what are called qualitative or selective methods of credit control, as distinguished from the above three methods which are quantitative methods. The latter operate on the liquidity of the banks, i.e. liquidity ratio. Qualitative methods operate on the conditions attaching to loans. While quantitative methods work in the direction of reducing the aggregate amount which can be lent, the latter are the methods of selection of whom and against what the loans will be given.

There are many forms which qualitative control may assume. One of these is the familiar one of the Central Bank extending rediscounting facilities only if certain conditions are fulfilled. For instance, in most countries the Central Bank rediscounts only those bills of exchange which bear at least two good signatures. Consequently there is a tendency among the member banks to restrict their discounting to those bills which the Central Bank will accept.

Another form is that advances against certain kinds of collateral may be prohibited. The Central Bank may, for instance, prohibit banks from making advances against certain foreign securities or against stocks of some specific commodities, etc. etc.

One very important form of qualitative control is fixing of margins. When a bank lends against gold or securities, or a stock of some commodity, it does not lend to the extent of full value of the pledge. For the loan may have to be recovered by the sale of the pledge and if at the time of recovery its price stands low, the bank may suffer a loss. The difference between the value of the pledge at the time of giving loans and the amount lent is known as margin. Now, if the Central Bank fixes a high margin, borrowing capacity of those who borrow against such pledges is reduced. The method of fixing margins was first adopted in U.S.A. in 1934. It was realised that such a policy could be successful only if dealers in registered securities were also brought within its orbit. Hence the Board of Directors of the Federal Reserve System (their Central Bank) was given power to regulate loans against registered securities even by brokers, members of security exchanges, and other dealers. All of them had to observe the margin regulations. The margin fixed in the beginning was 55 per cent of the current price of the security.¹ For one year during the last war the margin required in some cases was 100 per cent. That is, no loans could be given against such securities.

Qualitative control may be exercised by imposing restrictions on the manner of repayment of loans. Such restrictions may be in respect of down payment, i.e. the first instalment, and the number

¹ In fact the formula was a very complicated one. For details, see Sayers: *Modern Banking*, pp. 268-272.

of instalments or the period of repayment. This method also was first employed in U.S.A. to regulate consumers' credit during the last war. The down payment prescribed varied from 15 per cent to 33 1/3 per cent of the loan. The period of repayment was first fixed at 15 months and was later on increased to 21 months. This method is considered most suitable for controlling expenditure on durable consumer goods, which is believed to be unstable. By restricting this expenditure, prices can be checked from rising, and by liberalising conditions of repayment, prices can be checked from falling. In U.S.A., regulation of consumers' instalment credit was reintroduced after the war in 1948 to control rising prices, and in 1949 restrictions were relaxed as a part of anti-recession policy. It is believed that these measures helped to achieve their respective purposes on both the occasions.

Moral suasion. In many countries, the Central Bank enjoys vast statutory powers of control over the commercial banks. For instance, the Banking Companies Act of 1949 empowers the Reserve Bank of India to determine the policy of the banks in relation to advances to the public, and the banks are bound to follow the policy so determined. The Reserve Bank may restrict the purposes for which advances may be made; it may prohibit any particular transaction or class of transactions. In those countries where the Central Bank does not possess such statutory powers, they are usually delegated to it by the government on appropriate occasions.

But powers of direction are rather rarely used. For instance, the Bank of England has never employed its directive power, while the Reserve Bank of India has done so on few occasions. This is because, as a rule, commercial banks listen to the advice given by their Central Bank with respect. When the Central Bank asks the commercial banks—through a circular letter or in a meeting called for the purpose—to exercise caution or liberality in lending in general or in lending against any specified collateral, the commercial banks accept its advice and carry it out. This method of advice for the control of bank advances is called the method of moral suasion.

EFFICACY OF THE METHODS OF CREDIT CONTROL

Efficacy of bank rate policy. We have already noted that in those countries, where the *bank rate* stands above the market rate of discount, the *bank rate* policy, by itself, is not effective in bringing about contraction of credit though it has chances of success in expanding credit. For contraction of credit, *bank-rate* policy can be successful only if either the banks invariably adjust their policies in accordance with those of the Central Bank, or if the *bank rate* policy is supplemented by appropriate open market operations.

The success of *bank-rate* policy depends on institutional factors. When the Central Bank changes its rate of discount, it is required that not only do the banks change their discount rates, but also that the rate of interest outside the banking organisation changes. Now, in under-

developed countries, population is predominantly rural and among them the rate of interest is customary, not competitive. Manipulations in the *bank rate* are bound to be less effective.

Bank rate policy pre-supposes elasticity not only in interest rates but also in wages and prices. In recent years certain factors have tended to introduce an element of rigidity in wages. There are vociferous trade unions which would resist cut in wages when prices are falling. On the other hand, when prices are rising, wages lag behind because it takes trade unions some time to compel the employers to concede higher wages. Another factor, which has tended to make the wage structure less responsive to monetary changes, is that governments of today view wage cuts with disfavour. Thus wages do not change, or change with a lag, in response to monetary policies.

Bank rate policy fails to reduce aggregate demand during a boom because people are optimistic about future prices. Also, if exports of goods are large or imports of capital are large, a rise in the *bank rate* fails to lower aggregate demand. Similarly in a period characterised by a wave of pessimism among producers, lowering of rate of interest will fail to induce people to step up their purchases of consumer goods or investment goods. Rate of interest is a weapon which, at best, is a fair weather friend. When the problem is of moderate intensity, it might work. But if the malady is desperate, its effect is inappreciable.

A very important factor contributing to decline in the importance of *bank rate* policy is the increased use of selective methods of credit control. *Bank rate* policy is an indirect method of influencing bank credits and takes time to produce results. Moreover, in recent times economists have been stressing the disturbing effects of this method. Variations in the rate of interest increase uncertainty in business and thus shake confidence. The disturbing effects are more or less certain to occur, especially if variations in the *bank rate* are frequent. And it is not certain that changes in the *bank rate* will produce the desired curative effects. When cost structures are rigid, curative effects are very uncertain indeed!

Efficacy of open market operations. Open market operations score over the *bank rate* policy for two reasons. First, they operate directly on liquidity position of banks. The method of *bank rate*, on the other hand, influences the market rate of discount which in its turn influences liquidity of the assets of the banks. Hence while the method of *bank rate* is an indirect method of controlling liquidity, open market operations directly affect liquidity and lending capacity of banks. Secondly, *bank rate* policies are apt to encounter hurdles in respect of response of banks to them. When the *bank rate* is raised, the rate of discount of the banks may remain unaffected. When it is lowered, the banks may not avail of the facility because some banks consider borrowing from the Central Bank a sign of weakness. The impact of open market operations is on the liquidity position of the banks and they cannot ignore changes in liquidity of assets.

But open market operations have their own limitations. A Central Bank does not have unlimited number of government securities to sell. Moreover, as note-issue is regulated by law and as a larger amount of state money becomes appropriate as *bankers' deposits* increase, there is a limit on the extent to which the Central Bank can create these deposits. Lastly, open market operations prove ineffective if people nullify their influence by their actions. For instance, if more money is handed over to the people by purchasing securities but those who receive this additional money hoard it, the step taken can produce little result.

Efficacy of qualitative methods. Qualitative methods of credit control operate directly on bank advances. They can, therefore, produce immediate results. Secondly, these methods do not have any disturbing effects of the type which variations in the *bank rate* might produce. But the most important argument in their favour is that they are a method of selection. By quantitative methods it is possible to influence economic activity as a whole. Now, it may so happen that one sector of the economy needs to be extended more credit, while unhealthy expansion of another sector has to be discouraged. In such cases, it is only the qualitative methods which can help to achieve the desired end. However, if loan market is perfect, loans to one industry may be passed on by the borrowers to the producers in other industries. Selective control is then impracticable. But in the real world, especially in underdeveloped areas, markets for loans are imperfect and are embanked from one another. Selective control has, therefore, a significant role.

Efficacy of monetary methods. Monetary methods of control—quantitative as well as qualitative—will bear fruit only if control of credit is comprehensive. This implies that either non-bank credit forms a small part of total credit, or the control extends over the entire field. Much, therefore, depends on institutional factors. In U.S.A. even for fixing margin or for control of consumers' instalment credit, it was found necessary to bring brokers and dealers on security exchanges within the purview of control. In a country like India, where 90 *per cent* of the credit is supplied by non-bank sources and where the agencies are varied and dispersed, monetary methods of control cannot by themselves produce adequate effect.

We may, however, conclude by saying that though we cannot be certain that monetary methods of credit control will, by themselves, produce the desired effects, we are certain of the direction in which they exercise their pull. Their own contribution may, therefore, be slight, but they can undoubtedly be helpful to other measures which may be adopted to produce similar results. In other words, even if their own efficacy is slight, they can create the necessary climate for non-monetary measures to prove effective.

CREDIT CONTROL IN UNDERDEVELOPED COUNTRIES

Peculiarities. Conditions in underdeveloped countries are different from those in advanced countries, therefore they present problems of

their own. But the complexion of problems is not the same in all underdeveloped countries, because there are important differences among these countries *inter se*. In some underdeveloped countries there are few commercial banks. In others they are concentrated in a few cities and towns. In still others there is a well spread banking system but there is no well developed short money market or bill market. In fact the absence of a well developed short money market is a feature common to all underdeveloped countries. Lastly, we may note the peculiar case of South Africa where only two banks have branches spread all over the country.

Paucity of commercial banks. Take, first, the case of a country in which there are few commercial banks. In such a country the money supply consists mainly of state money. Bank advances are, by assumption, small, therefore a control over them can produce no appreciable effect on aggregate demand. The only part of the liquidity of the system, which can be tackled, is state money.

In these circumstances, the only instrument of control seems to be foreign exchange. By selling foreign exchange the Central Bank can reduce money supply to the public. Similarly by purchasing foreign exchange from the people, it can increase the supply of money to them.

However, the controlling power which foreign exchange transactions give to the Central Bank is only apparent, not real. Suppose the exchange rate is kept fixed. Then the peoples' demand for and supply of foreign exchange will be regulated by the position of the balance of payments and not by the policy decisions of the Central Bank to purchase or sell. Suppose, on the other hand, that the Central Bank varies the exchange rate for effecting changes in the money supply. To increase money supply it will have to buy foreign exchange. For that it must induce the people to sell foreign exchange to it by offering them a higher price. Similarly to reduce money supply it will have to sell foreign exchange. And people can be induced to buy if it is offered at a lower price. Such a policy evidently produces two very adverse effects. First, it produces frequent variations in the exchange rate and induces unhealthy speculation. Second, the Central Bank always has to buy dear and sell cheap and, thus, suffers heavy losses. Control of effective demand through foreign exchange transactions is, therefore, no control at all.

The only method for an effective control is that the Central Bank arranges for an extension of banking facilities. It may itself open branches all over the country and do commercial banking business itself. This will give it a direct control over advances and their regulation will be easy as well as effective. But there is an important objection against the whole banking business of the country being done by the Central Bank, or any single bank. For, in that case, it is bound to be very cautious in its lending policy. Those, who are promising but do not command adequate resources nor can offer adequate collateral, will not be able to enter business. And this is suicidal for a country whose problem is economic advancement at a fast rate. Hence

the only method which can be recommended is that steps should be taken to develop a system of commercial banks. Whether this is achieved by promising liberal rediscounting and loan facilities or by some other methods, is a different matter.

Concentrated banking facilities. Let us now consider the case of a country in which adequate banking facilities are available in trading and industrial centres, but there are no such facilities in the hinterland. In such countries changes in bank advances do not produce the desired results, unless such changes are accompanied by large changes in the quantity of state money.

For instance, suppose the Central Bank induces the commercial banks to increase advances to the public. This will increase aggregate demand in the business centres and prices will rise there. Now, the hinterland has trading contacts with these centres but no banking contacts. Consequently, large amounts of state money will flow into the hinterland. Cash base of the banks, and therefore their liquidity position, will become weak. They shall have to call back advances. Some of the banks may even fail in the process. This is why in such countries it is essential to insist with the banks that they maintain high liquidity.

Concentration of banking business. We have already stated that the case of South Africa is a peculiar one, because her whole banking business is concentrated in two big banks, each having a large number of branches spread all over the country. If the two banks agree to extend unswerving cooperation to the Central Bank, the problem of control of credit becomes a simple affair. For two banks are easier to contact than many. But if the two banks generally act in concert with a view to exploit the depositors and dealers, they may make the policy of the Central Bank ineffective. In that case it becomes incumbent on the Central Bank to adopt measures for bringing into existence more banks. Failing that the Central Bank may open a large number of branches of its own and provide adequate banking facilities to make their monopolistic behaviour ineffective.

Young Central Banks. Establishment of Central Bank has in every country been preceded by the existence of a number of commercial banks. When the Central Bank is established, the commercial banks do not immediately start making use of its lending, or even rediscounting, facilities. In fact, in the initial stages commercial banks fight shy of asking for financial accommodation from the Central Bank, because they consider it a mark of weakness.

Now, it is evident that the power of the Central Bank to influence the activities of commercial banks greatly depends on how much use is made of the former as a lender of the last resort. As a new Central Bank is only infrequently approached for financial accommodation, its control over the commercial banks comes to be limited. In such a case variations in the *bank rate* are much less effective. Other methods of control have to be mainly relied on. For example, the

policy may operate on compulsory deposits with the Central Bank or on the minimum liquidity ratio.

Absence of short money market. In all those countries where there is a well developed short money market, treasury bills and bills of exchange are assets of high liquidity, because these papers can be easily rediscounted. Also, the existence of such a market ensures effectiveness of *bank rate* policy. A rise in the *bank rate* raises the market rates of interest and the banks are less inclined to get their papers rediscounted. Similarly a fall in the *bank rate* lowers the market rates and liquidity of the rediscountable assets increases.

In the underdeveloped countries there is no well developed short money market. In every such country the Central Bank has to adjust its policy accordingly. One essential feature of this policy is that the commercial banks do not have any power to issue notes. For, otherwise, a bank may meet its liabilities by paying its own notes, which is not clearing a liability but substituting it. As the liquidity of the assets is less, liabilities must be kept within limits and false clearance by bank notes should not be allowed. The other essential feature of this policy is that the Central Bank provides financial accommodation to the banks, *i.e.* it acts for them as lender of the last resort. This becomes necessary because otherwise liquidity of the bills will be low.

In some countries, including India, a commercial bank is statutorily required to keep a given percentage of its liabilities with the Central Bank. This may be a good safety measure, but it does not in any way improve the liquidity position of the commercial bank. For this money is not made available to it for use except when it has gone into liquidation.

Institutional factors. The power of a bank to create credit depends on its liquidity position. But given the liquidity position of a bank, this power depends on institutional factors, the chief being how payments are generally made and accepted. In other words, there is a limit set on credit creation by institutional factors. In underdeveloped countries these factors are not so helpful. Consequently, a higher liquidity ratio ensures safety in such countries, and the scope for effective application of monetary policy is more limited. Nevertheless, as diversification and growth of the economy proceed and as money market becomes more organised, effectiveness of credit control measures increases.

Efficacy of the various measures. Bank rate policy is generally not so effective in underdeveloped economies as in advanced countries for various reasons. First, there is no short money market. Secondly, banking facilities are confined to a few trading centres. Thirdly, institutional factors are much less helpful. And, lastly, the Central Banks in these countries do not desire to make *discount rate* a penal rate because it is their policy to maintain easy money conditions. Conditions in many countries are now improving. Banks are expanding and are

increasingly coming to rely on their Central Bank for financial accommodation. And steps are being taken to develop bill markets.

Open market operations may prove effective to some extent but there is a serious limitation. In underdeveloped countries there are few dealers, apart from the commercial banks, who are interested in the sale and purchase of securities. Also, banks are few and are of limited means. Consequently the demand for and the supply of government securities in the stock exchange markets is relatively less elastic. The Central Bank can make large purchases and sales of them only by large variations in their prices. But large variations in their prices may lead to unhealthy speculation, losses to the Central Bank, loss of confidence of the people, and the like.

Thus the methods of control which would be appropriate for an underdeveloped economy are: variations in compulsory deposits with the Central Bank; variations in minimum liquidity ratio, and moral suasion. The first two methods may sometimes lead to a large proportion of resources becoming non-income yielding and thus loss of profit to the banks. Moral suasion is the most preferable. Hence here, as elsewhere, cooperation between various constituents of the money market is the most helpful factor.

Further Readings:

1. Sayers : *Modern Banking* (3rd edition), Chs. 3, 5, 7, 9, 11, 12.
2. The Reserve Bank of India : *Functions and Working*, Chs. 2 to 5.
3. Radcliff Committee Report : Chs. V to VII.
4. Sen : *Central Banking in Underdeveloped Money Markets*, Chs. 2 to 5, and 7 to 11.
5. De Kock : *Central Banking*, Chs. 2 to 4, 6, and 8 to 13.

CHAPTER XXXIV

MONETARY STANDARDS

MONEY AND THE STATE

Composite legal tender system. All monetary systems of today are composite legal tender systems. One coin or note is declared as standard money. Its supply is supplemented by other forms of money which are expressed as multiples and sub-multiples of it. The multiples are, like the standard money itself, unlimited legal tenders. The sub-multiples are treated as subsidiary money. Such a system is suitable for transactions of all sizes—small, medium, as well as large ones.

Functions of the state in respect of standard money. Every modern state assigns to itself two functions in respect of standard money. First, it declares it as money conforming to the description, called money-of-account. It not only undertakes to accept it at *par* in discharge of debts, but also makes it compulsory for all residents to accept it in lieu of business obligations. It is in this manner that the circulation of standard money at its face value is assured. For example, in India every rupee coin (or rupee note) must be accepted by the government or a resident of the country in discharge of a business obligation of one rupee.

The other function of the state in respect of standard money is to regulate its purchasing power. It is this function of the state which gives rise to a monetary standard for the country. For a monetary standard refers to the principle method by which the purchasing power of standard money is regulated. For instance, if the state statutorily binds itself to keep the value of a unit of standard money fixed in terms of a given quantity of some metal, the country is said to be on a mono-metallie standard. Similarly if the state decides to have two standard moneys, the value of each corresponding to a given quantity of a different metal, and the ratio between their values is kept fixed, we have a bimetallie standard. And if the purchasing power of standard money is controlled by regulating its quantity, the country is said to be on paper standard.

In most cases, the different kinds of money other than standard money are convertible into the latter. Regulation of purchasing power of standard money, therefore, implies that value of all forms of money is being regulated. Also, as we saw in the last chapter, the quantity of bank money depends on the quantity of state money made available to the public. Hence regulation of the quantity of standard money means regulation of the aggregate of exchange media made available to the community at any given time.

The state thus undertakes to maintain the face value, as well as to

regulate the purchasing power, of money. It sometimes so happens—mostly in periods of war—that monetary propriety is subordinated to other objectives. To meet requirements created by these other objectives, the monetary authority may issue large quantities of state money, thereby sinking very low the purchasing power of standard money. Inflationary spiral starts and goes on gaining momentum. Face value is maintained while market value falls progressively. If inflation proceeds very far, people may repudiate money, not accepting it in discharge of obligations even though it is legal tender. Hence if purchasing power of money falls very low, face value may also disappear. Such cases are, however, rare.

MONOMETALISM

Definition. Some writers have defined monometallic standard as the monetary system in which there is only one form of standard money which is full-bodied and is made of a given weight of a metal of given fineness. Now, the purpose of monometallic standard is to maintain the value of the standard coin equal to that of a piece of the metal of given weight and fineness. Making the standard coin itself of that metal is not the only method of achieving this end. Other methods are also available and have so often been employed. Hence monometalism is better defined as a monetary system in which market value of standard money is kept fixed in terms of a given quantity of a metal of given quality.

Three forms. There are three possible methods by which value of the standard coin can be made to conform to the value of a given quantity of the metal. One is that the standard money itself is made of that metal. In addition, the people are given full liberty to get the metal minted into coin upto unlimited amounts, as well as to melt coins whenever they please. When these provisions are made, the value of the coin cannot deviate from the value of the given quantity of the metal. For if the value of the coin rises above that of the metal, people will present more metal for minting, so that value of the metal will rise and that of the coin will fall till the two are equal. If, on the other hand, the value of the coin falls below that of the metal, people will melt the coins till the two values coincide again.

The second method is to statutorily bind the monetary authority to convert standard money into the metal and the latter into standard money, at a fixed rate. In such a case, the standard money is neither made of the metal, nor is it full-bodied. Its value, however, cannot deviate from that of a given quantity of the metal. For in case of any deviation, people will take advantage of the provision of convertibility. The ratio between their values must be the same as the official ratio.

The third method is to fix a ratio at which the monetary authority is obliged to purchase and sell a foreign currency which itself is tied to the metal in its own country by either the first or the second method. In other words, a foreign currency may be selected which is either made of the metal or is convertible into the metal at a fixed rate. The

monetary authority of the country in question is bound by law to exchange home currency for the foreign currency, and *vice versa*. It is self-evident that to thus fix the value of the home currency is, in effect, to fix it in terms of the metal.

Choice of the metal. Generally gold or silver has been used for monometallic standard.¹ When gold is thus selected as standard metal for the currency, the monetary system is called the gold standard. On the other hand, when silver is used for the purpose, the country is said to be on the silver standard. Gold standard has been common in the later part of the nineteenth century as well as the beginning of the present century. We study below questions relating to the gold standard, but all analytical observations shall, *mutatis mutandis*, apply to the silver standard.

THE GOLD STANDARD

Meaning and forms. Gold standard is the monometallic standard in which gold is the standard metal, so that the value of standard money is kept equal to that of a given weight of gold. As we have said above, there are three methods of achieving this. Corresponding to each of these three methods, we have a different kind of gold standard.

When the standard coin is made of gold and its minting is free and melting is allowed, the country is said to be on gold currency standard or full-fledged gold standard. When the second method is followed, that is when the monetary authority undertakes to buy and sell gold at a fixed rate, gold bullion standard is in operation. Lastly, if the monetary authority of the country is obliged by law to buy and sell, at fixed rates, the currency of a foreign country which is on the gold standard, then the former country is said to be on gold exchange standard.

One essential feature common to all the three types of gold standard is that there is no embargo, whatsoever, on the import and export of gold. As we shall presently see, this condition must be satisfied if it is to be a gold standard *par excellence*. In case value of the standard coin is kept equal to the value of a given quantity of gold, but some restriction is placed on the export or import of gold, the monetary system will be a limping gold standard. Free export and import of gold is, thus, one of the two legs on which the gold standard stands, the other being the link of the standard coin with gold.

Comparison of the three forms. The three forms of gold standard have, then, two features in common. First, in each case value of the standard coin remains at level with that of a given quantity of gold. Second, in each case movements of gold into and out of the country are unrestricted. There are differences also. Gold bullion and gold exchange standard are economical, while gold currency standard is more confidence-creating. The latter is, therefore, more suitable

1 Iron was used as the standard metal in the kingdom of Sparta.

for a country where people are uninstructed and are sensitive to rumours. Gold exchange standard has an additional merit. In gold bullion standard, reserves are kept in gold which is a non-income yielding asset. In gold exchange standard monetary reserves can be kept in the form of foreign securities on which interest can be earned. It is sometimes said that the value of foreign securities might fall in terms of gold and then the country on the gold exchange standard might suffer a loss. This, however, is not a demerit peculiar to the gold exchange standard. For, even when a country is on the gold bullion standard, there is always a risk that value of gold might fall in the international market.

Two functions. The gold standard is said to perform two functions. In the first place it is a convenient method of controlling the domestic currency. Currency laws of the country, which is on the gold standard, generally place restrictions on the issue of currency notes. The restrictions usually take the form that notes can be issued only if some quantity of gold is held in the reserve. The amount, which can be issued without any such backing, may be fixed and it may be provided that any amount in excess of that must be backed hundred per cent by gold. The amount which can be issued without any backing is called fiduciary issue. Or else, the proportional reserve system may be enjoined according to which the gold in reserve must not be less than a given percentage of the total note-issue. In either case, the purpose is to restrict the issue of notes with a view to maintaining internal value of money. When only one country is on the gold standard, this is the only function which the standard has to perform, and the standard may, therefore, be called the domestic gold standard.²

The other function of the gold standard is to keep exchange rate of domestic currency fixed in terms of currencies of other countries which are on the gold standard.³ When two countries are on the gold standard, their respective monetary authorities undertake to buy and sell gold (directly or indirectly) in unlimited amounts at fixed rates. The price of gold in the two countries is thus fixed in terms of their standard coins. This, obviously, fixes the value of the two coins in terms of each other. For instance, suppose a unit of standard money in country A is valued at $1/3$ rd. of an ounce of gold and that of country B at $1/4$ th. of an ounce. Three units of the former will then exchange for four units of the latter, because both represent the value of one ounce of gold. It must be evident that gold standard can, and will perform this function between those countries only which are on the gold standard. In other words, this function belongs to the international gold standard. When we spoke of unrestricted movement of gold into and out of the country as one leg of the standard, it was the international gold standard which was meant.

2 Crowther uses the phrase "domestic gold standard" to denote this function rather than this type of the gold standard. cf. *An Outline Of Money*, (Revised edition), p. 284.

3 In the following argument we abstract from the costs of transportation.

THE DOMESTIC GOLD STANDARD

Stabilising volume of currency. It is sometimes claimed that gold standard stabilises the volume of currency and thereby stabilises the internal value of the currency. It is said that the quantity of standard money is limited by the size of the gold stocks in the country; the issue of notes is, because of their convertibility, limited by the quantity of standard money; and the quantity of bank money is, because of the necessity of a minimum cash ratio, limited by the aggregate quantity of state money.

The argument given above is unsound in many ways. In the first place, it assumes that the stock of gold with the monetary authority in a country remains more or less fixed. There is no justification for this assumption, because there are a large number of factors which may produce variations in the gold holdings of a monetary authority. First, in a country on the gold standard, gold is required for monetary as well as industrial purposes. Variations in the demand for industrial purposes will give rise to variations in the supply of gold for monetary purposes. Secondly, gold may be used as a medium for hoarding. Dishoarding will increase the supply, and increased hoarding will reduce the supply, for monetary requirements. Third, imbalance in the balance of payments with other countries will tend to change the quantity of gold with monetary authorities. Lastly, though ordinarily supplies of gold available to the world as a whole change rather slowly, yet when new mines are discovered, supplies increase with a jump. When quantities available to the world as a whole increase, the same available to an individual country also usually increase. Thus the belief, that with gold standard the quantity of money in the country is static, is unwarranted. Quantities of gold with the monetary authority are liable to fluctuate, sometimes very widely indeed. These fluctuations in the stock of gold are apt to produce changes in the quantity of money.

Stability in the price level. Another objection to the argument is that even if we admit that the gold standard does stabilise the volume of money in the country, it does not mean that stability is achieved in the price level. Stability in the price level can be attained by adjusting the supply of money to changes in the demand for money or, what Crowther calls, changes in "money work". We have already studied the cash transactions as well as cash balances version of the quantity theory. According to the former, the amount of "money work" increases when transactions increase. According to the latter, it changes with changes in the proportion of resources which people prefer to keep in the form of cash. In either case, the amount of "money work" is liable to variations. If the total quantity of money is stable while "money work" is marked by variations, price level will fluctuate. Only, of course, the price of gold remains stable.

It is, then, evident that the gold standard maintains only the price of gold at a given level. There is no mechanism implicit in the gold standard which can undertake the function of stabilising price

level. It is a very backward tribe indeed which can be satisfied with an elimination of fluctuations in the price of gold only. If internal stability is the objective of policy of a monetary authority, it must be stability of the general price level. Stability in the price of gold has little meaning.

INTERNATIONAL GOLD STANDARD

Encouragement to trade and capital movements. When gold standard is adopted by a number of countries, exchange rates between them become fixed. As we have already seen, this fixity of exchange rates arises from the convertibility of coins in their respective countries into gold at fixed rates. Stability of exchange rates eliminates one element of uncertainty which could arise from fluctuations.⁴ So far as it goes, it leads to expansion of international trade. It is also conducive to international movements of capital. Fluctuations in exchange rates are discouraging to foreign investments; stability promotes confidence of foreign investors.

Automatism of the standard. The most important merit claimed for the gold standard is its automatism. It is asserted that an imbalance in the balance of payments—a difference between claims and liabilities of a country arising out of its transactions with the rest of the world—gets automatically corrected when countries have adopted this system. This, it is held, is brought about by movements of gold as between the countries on the gold standard.

Suppose a country has an adverse balance of payments, i.e. it has to make to other countries more payments than it has to receive. The net balance is paid out in gold. Diminution of gold in the country means that there will be less currency. Not only that! The loss of gold leads to reduction of cash with the banks and bank money contracts. And we know that a given amount of cash supports a much larger amount of credit. Thus the total contraction in exchange media is much greater than the quantity of gold which moves out. Similarly, in the gold receiving country total expansion in exchange media is much more than the inflow of gold.

Classical writers stressed the effects of gold movements on prices and costs. They held that gold movements out of the country reduce money in circulation, which, in accordance with the quantity theory of money, leads to a fall in the price level. Its exports are encouraged and imports discouraged. Claims on other countries arising out of transactions increase and payments which fall due to them on account of imports diminish. The imbalance in the balance of payments is removed. Similarly in the gold importing country costs and prices

4 In fact fluctuations are not completely eliminated. The exchange rate between two countries on the gold standard does fluctuate between the narrow limits, called specie points. We shall take up the question of specie points in chapter XXXVII. As, however, specie points are not wide apart, fluctuations are small and the argument holds, in substance.

rise which reduce its exports and increase imports. Thus its excess of credits over debits is wiped out.

Modern economists stress the effect of changes in monetary circulation on incomes and expenditures. It is said that purchasing power in the gold-losing country falls. Incomes and expenditures fall there. Its people make less purchases from the outside countries. On the other hand, in the gold-receiving country incomes and expenditures rise which increase foreign purchases and reduce exports. Another important factor is the rate of interest. When a country loses gold, cash holdings of banks fall and they raise the rates of interest. Funds are attracted from outside. This also tends to reduce the divergence between credits and debits with other countries.

In any case, the gold standard brings about an automatic adjustment in three steps. The first step is that countries with negative balance lose gold and those with positive balance receive it. The second step is that credits contract in the former and expand in the latter. The third step is that exports are encouraged and imports discouraged in gold losing countries and imports increase and exports fall in gold receiving countries. The imbalance thus gets removed.

Hurdles in the working of international gold standard. The international gold standard will bring about adjustments in international payments if it is permitted to do its job unobstructed. And it did so upto 1914. Since then, however, factors have appeared which have made performance of this function difficult for the gold standard.

1. *The golden rule.* If the gold standard is to prove an effective weapon against disparities in the balance of payments, the governments concerned must observe the rule of the game. We know that modern currencies are overlaid with large credit superstructures. Now, exports of gold will correct the adverse balance of payments if the total amount of money in the country decreases. When gold is flowing out, credit must also contract. The monetary authority must adopt policies so that bank advances are reduced. Similarly, when gold is flowing in, credit must be expanded. This, then, is the rule of the game: *Contract credit when gold is flowing out, and expand credit when gold is flowing in.*

Modern governments are generally not prepared to observe the rule. As a result of writings of Keynes, stability of internal trade and prices has come to occupy a place of precedence over stability of foreign trade. And rules of the gold standard come into conflict with the aims of domestic monetary policy. If outflow of gold is permitted unrestricted and is reinforced by credit contraction, incomes, expenditures, prices, production, and employment fall, and conditions of depression ensue with all their attendant misery. Moreover, the outflow of gold may not raise price levels abroad if the latter are sterilising gold. Even otherwise, imports may be restricted by foreign countries by raising customs duties. This is why England, when she

returned to gold standard in 1925, adopted only a limping gold standard, that is not permitting unrestricted exports of gold.

Even a continuing inflow of gold is not welcome. It locks up resources in gold, which is a barren investment. Moreover, if credit expansion accompanies imports of gold, prices rise and inflationary spiral is likely to develop. And inflation is no less an evil than depression. It is this fear of inflation which leads gold receiving countries to sterilise gold by raising discount rate.

Hence one hurdle in the way of successful working of the gold standard in modern economies is the unwillingness of modern governments to subordinate interests of internal trade and production to those of foreign trade. And, to quote Crowther, "gold standard is a jealous god. It will work—provided it is given exclusive devotion."⁵

2. *Rigidity of cost structures.* We have noted above that, according to classical economists, movements of gold bring about adjustments in the balance of payments by operating upon costs and prices. Modern economists also attach importance to changes in costs and prices. But cost structures have become rigid so that downward movements in them are rather difficult to occur. Taxes are inflexible and interest rates sticky. Mounting influence of trade unions has made wage rates also very rigid. Cuts in wages are firmly, and in most cases successfully, resisted. Hence when gold flows out, costs do not fall appropriately. Consequently, necessary outflows of gold are large which exhaust the patience of monetary authorities before the desired results have been achieved.

3. *Capital movements.* Frictions are caused by movements of capital. When gold is flowing out, prices are expected to fall. Capital, therefore, begins to be exported. Exports of capital make the balance of payments more adverse. In other words, they aggravate the problem. And such exports of capital are difficult to stop by raising interest rates. Similarly in gold receiving countries, prices are expected to rise and capital flows in. Thus, while a successful working of the gold standard requires that capital flows towards countries losing gold from countries receiving gold, anticipations about prices produce just the opposite kind of movement. Probability of smooth working of gold standard has become remote since international movements of capital have become substantial in recent years.

FUTURE OF THE GOLD STANDARD

Internal stability and exchange stability. There are not many advocates of the return of gold standard, because the service which it could possibly render is difficult to perform in the economic world of today. No doubt, stability of prices has been achieved by it over long intervals. But that was when production of gold proceeded smoothly and there were not large variations in its demand for industrial

purposes. Otherwise, as we have seen, this standard cannot perform the function of keeping internal price level stable. It only keeps the value of currency fixed in terms of gold which is no achievement of any importance. It is, therefore, only on the international front that the case for gold standard can be pressed.

In fact, a vote for gold standard is a vote for subordination of other economic objectives to achievement of exchange stability. If internationally adopted, the standard secures stable exchange rates. When exchange rates do not fluctuate or fluctuate within narrow limits, an uncertainty-creating factor is eliminated. Risks are reduced and trade expands. But the gold standard gives exchange stability only at a price which is heavy indeed. That price, as we have said, is the subordination of all other economic objectives, including the objective of domestic stability at high level of employment which is today universally accepted as one of the primary objectives of economic policy. Monetary policy, as an integral part of economic policy, must give precedence to this aim.

Brake on irresponsible policies. Another merit claimed for the gold standard is that it serves as a brake on irresponsible actions of monetary authorities. It is said that if any one country embarks on a policy of inflation, it will soon find gold flowing out of the country. Export of gold is a veritable brake on inflation assuming any serious proportions. Similarly no country can embark upon deflation for any considerable time, because gold will begin to flow in and the country concerned will have to fall in line with others. But there is the other side of the picture too. When a number of countries adopt a policy of deflation, purchasing power of the people in those countries falls and, hence, their imports from other countries decline. These other countries may then be compelled to resort to deflation. Similarly about inflation. Hence if, on the one hand, it is true that when gold standard is adopted by a large number of countries, no single country among them can resort to heavy or continued inflation or deflation, on the other hand it is also true that a country may have to adopt inflationary or deflationary measures just because others are doing so.

Automatism. Success of the gold standard in bringing about adjustments in the balance of payments depends on the policies of monetary authorities. And a modern government, whose economic policy aims at domestic stability and high employment, would refuse to let its policy drift in the direction in which gold movements point. Even if monetary authorities observed the "rule," success of the gold standard cannot be assured. For we live in a world where restrictionist temper holds sway, where cost structures are rigid, and where capital movements are guided by anticipations about prices rather than by differences in interest rates. The climate of our times is unsuitable for the gold standard.

BIMETALLISM

Essentials of bimetallism. If, instead of one, there are two standard coins each made of a different metal, the country is said to be on a

bimetallic standard. The two metals have generally been gold and silver. There are four essentials of such a standard. First, there is a free coinage of both the standard coins. Any person holding gold or silver can get it converted into the relevant coin at the mint. Secondly, coins of both the metals are made unlimited legal tender. People have the full option of meeting their business obligations in either of the two. The third requirement is that the two coins are exchangeable at a ratio fixed by the state. Not that the absence of a fixed ratio will rob the standard of its bimetallic character, but that it will make monetary conditions chaotic. If the ratio between the two coins is left to vary with market prices of the two metals, there will really be two monetary units. There will then be two price levels, each fluctuating in terms of the other. Two monetary systems, independent of each other, are bound to spread currency chaos. A fixed ratio between the two standard coins is, therefore, indispensable to the smooth working of bimetallism. The fourth essential follows from the third. The government can effectively enforce a fixed ratio between the two coins if it undertakes the obligation of converting either of these into the other at that ratio. Also, it must undertake to convert currency notes into either of the coins at the option of the public. For these purposes the monetary authority has to keep reserves of both the metals.

Mint ratio and market ratio. The chief difficulty with bimetallism is said to arise when market rate comes to differ from the legal rate. The metal for which the legal rate is lower than the market rate is said to be undervalued. The undervalued currency begins either to be exported or hoarded because it carries a higher value in the market. In other words, the overvalued currency has a tendency to drive the undervalued currency out of circulation. As differences between market ratio and the legal ratio are apt to arise quite often, it is concluded that, in effect, the standard comes to be based sometimes on one metal and sometimes on the other. It is in rare intervals that it is based on both.

It must, however, be noted that market ratio and legal ratio cannot be different within the same country. For, when the monetary authority is prepared to exchange either coin for the other at the legal ratio up to unlimited amounts, no buyer of either metal would buy it dearer, nor would any seller sell it cheaper. Market rate must conform to the legal rate.⁶

The legal ratio fixed in a country may, however, differ from the ratio in the foreign markets. In that case, the undervalued coin begins to be exported or hoarded. Hence, if only one country (or even a few countries) adopts bimetallism, the system cannot work for any considerable period. If, however, bimetallism is adopted on a world-wide basis with a common mint (legal) ratio, divergence between market ratio and mint ratio would not be possible.

6 Of course, a divergence between the two will occur when stock of one of the metals with the monetary authority has been exhausted. But then bimetallism will have ceased to exist.

Case for bimetallism. International bimetallism has two advantages over mono-metallism. First, in a progressive world as ours, in which population and production are increasing, monetary requirements are also increasing. This increase in requirements can be better met by two metals than one. This is, however, not so important when the world has learnt the art of supplementing metallic currencies by paper currencies.

The second merit is important. Value of money tends to be stable in this system. When, due to improved technique or discovery of new mines, production of one of the metals becomes cheaper, its quantity increases and costs and prices rise. Cost of mining the other metal also rises. Its production decreases. Thus an increase in the output of one is balanced by a decrease in the output of the other.

But the case for bimetallism is only a case for an international bimetallism. It can succeed only if all countries, or a large majority of them, adopt it, and also all of them agree upon a single mint ratio.

PAPER CURRENCY STANDARD

Paper Money. When a country is on a metallic standard, it introduces currency notes which are of the value of multiples of standard money. These notes are promises of the currency authority to convert them on demand into standard money at their face value. They are, therefore, called convertible paper currency. These are issued only to facilitate carriage and transport of money and also to facilitate purchases and sales involving large payments. The monetary system, as it is still based on metallic money, continues to be a metallic standard.

Paper currency standard. If the currency authority suspends the provision of convertibility of currency notes into standard money—either because it has no intention or because it has no ability to convert—the paper money becomes fiat money or inconvertible paper currency. The first victim of inconvertibility of paper money is the metallic money. As the quantity of notes issued increases, metallic money is driven out of circulation. It is either exported or hoarded. When it has been completely replaced, any further increase in paper money raises prices and lowers exchange rate. Metallic currency may still be available at a premium. But the system shall, for all practical purposes, have become a paper currency standard.

A paper currency standard, in its pure form, exists when the standard or definitive money itself is a paper note. In that case convertibility of currency notes of higher denominations carries no meaning because notes are convertible into notes. For instance, in England a five sterling note is convertible into sterlings, but sterlings are themselves notes. Similarly, a ten- or a hundred-rupee note in India is convertible into rupee notes only.⁷ Most countries of the world are today on paper currency standard.

7 Even rupee coins are notes printed on metal.

Currency notes, which have been declared inconvertible or are convertible only into "standard notes," continue to circulate for two reasons. First because they have the authority of the government behind them. Second, and the more important reason is, that they are issued in limited quantities so that they are just enough to do the money work. If, however, they are issued in excessive amounts, evils, like rise in the price level and depreciation in the value of money in the foreign exchange market, prevail. If their issue is increased continuously, people lose confidence in the currency and the dangerous phenomena like the loss of face value of money and flight of capital raise their ugly heads.

Evaluation of the system. Paper currency standard is essentially a managed system and its success or failure depends on how it is managed. If the issue of paper money is properly regulated, its value can be kept stable more easily than of a metallic currency. The value of a metal like gold depends on the world's supply of gold which is a factor beyond the control of the monetary authority of any single country. But the value of paper money, depending as it does on the quantity of note-issue, can easily be regulated by such an authority. While gold standard is better suited for exchange stability, paper standard is much better suited for implementation of domestic economic policies with respect to incomes and employment. A paper currency standard is also a cheaper standard, because it does not oblige the government to lock up its resources in the form of any non-income yielding assets.

The demerit of the paper currency standard lies in the ease with which it can be issued in excess. Whenever the government is faced with financial difficulties, issue of paper currency provides the easiest way of getting command over purchasing power. This course has generally been adopted in periods of war. Thus it is in war years that extremes of note-issue and inflation have occurred—in Germany during the First World War, and in China during the Second World War.

I.M.F. AND THE GOLD PARITY STANDARD

Working of I.M.F. The coming into existence of International Monetary Fund has given rise to what may be called gold parity standard. The Fund was established in 1945 with a view to avoiding competitive depreciation of currencies without interfering with internal economic liberties of the member countries. Although the primary purpose of the the Fund is to promote exchange stability through international monetary co-operation, the Articles of Agreement are based on the assumption that considerations of output and employment must receive precedence over exchange stability.

Resources of the Fund consist of contributions of the member countries. Each country's contribution or quota is fixed. It varies from \$ 2750 million for U.S.A., to one-half million for Panama. Each member has subscribed its quota partly in its own currency and partly in gold or in U.S.A. dollars. Thus the Fund possesses stocks of various

currencies, standing to its credit in the respective Central Banks. Its working proceeds on the following lines:—

1. Each member country has to declare a *par value* of its currency in terms of gold. All calculations are, however, done in dollars.

2. The *par value* can be changed only to correct “a fundamental disequilibrium”—a term which has been left undefined in the Articles of Agreement, but which, for all intents and purposes, means a chronic imbalance in payment account with the outside world.

3. If the change to be effected in the exchange rate, together with all previous changes, is upto 10 *per cent*, the Fund has just to be notified about it. If the proposed change, when added to all the previous changes, lies between 10 *per cent* and 20 *per cent*, the Fund has to be consulted. It may agree or object, but it must give its answer within 72 hours. If the change proposed is above 20 *per cent* (added to the previous changes), the Fund may take a longer time to decide and may agree or disagree to this change.

4. For temporary difficulties in foreign payments, a member country can get financial accommodation from the Fund. It is, however, difficult to say whether the operation involved constitutes buying or borrowing the foreign currency. On the one hand, it may be considered buying it because the member concerned has to pay for it in its own currency. It is, on the other hand, borrowing because the Fund imposes certain charges, the extent of which depends on the amount and period involved. Anyway, the amount involved must not exceed, in any one year, one-quarter of the quota of the member country. Nor can the amount be such as raises the Fund's holding of the country's currency above 200 *per cent* of its quota.

5. If the Fund's holding of any currency is exhausted, it approaches that country for a loan. If the loan is refused, the currency is declared a scarce currency. The Fund begins to ration that currency and the other countries are expected to control their expenditure in that country.

6. If value of gold rises on account of scarcity, all *par values* may be changed.

Comparison of parity standard with gold standard. The gold standard, when internationally adopted, gives fixed exchange rates. It bids the member countries to adjust their domestic monetary policies in conformity with the movements of gold. It imposes a discipline with which all countries have to integrate their credit and monetary policies so as to have smooth trade relations.

The I.M.F. uses gold as a common denominator for the value of currencies. The value of currencies being fixed in terms of gold, it is said to have given the member countries a gold parity standard. It continues to assign gold an important place. So long as gold continues to enjoy the status of medium for international payments, it deserves a place of importance. But the merit of gold parity standard lies in

the fact that it secures the advantages of the gold standard without its expensiveness and rigidity. Countries on this standard have not to keep large stocks of gold. Nor have they to let economic conditions at home drift at the instance of gold movements. Gold standard sacrifices objectives of the domestic economic policy on the altar of exchange stability. Gold parity standard leaves a very wide scope for the pursuit of economic objectives on the domestic front. Gold parity standard also differs from the gold standard in that it seeks to secure exchange stability without rigidity. Changes in exchange rates are permitted; only frequent changes and competitive depreciation are to be checked. When there is a fundamental disequilibrium, it is better to realise that the exchange rate must be changed.

Avoiding rigidities of the gold standard, the parity standard can still achieve expansion and contraction of credit when and where required. Suppose, for instance, that India is a deficit country and so she purchases U.S.A. dollars. More rupees will be credited to the account of the I.M.F. in the Reserve Bank of India and the latter will get a command over dollars. When these dollars are sold to the banks, deposits of the banks with the Reserve Bank decrease. *Bankers' deposits* having contracted, there will be contraction of credit. The dollars received in U.S.A. as payments will increase *bankers' deposits* and expansion of credit will occur. The operation, therefore, has, to the extent that it goes, a correcting influence on the balance of payments.

Two doubts have been expressed regarding the working of the Fund. First, as there is a limit beyond which deficit countries cannot borrow and as there is nothing to bind the surplus countries to any action, the burden of correcting disequilibrium is placed mainly on deficit countries. This is unfair. Secondly, it is feared that accommodation permissible in respect of foreign currencies is very limited. For instance, India's total quota in the Fund is of the order of Rs. 200 crores. In any single year she can borrow only Rs. 50 crores. For a country whose foreign trade runs to the tune of Rs. 1200 crores, such an accommodation in times of difficulty is too meagre. Hence the Fund might prove only a fair weather friend, refusing to help when the storms are really furious.

Further Readings:

- | | |
|---------------|---|
| 1. Halm: | <i>Monetary Theory</i> , Chs. 9, 10, 12 and 15. |
| 2. Crowther: | <i>An Outline of Money</i> , Ch. 9. |
| 3. Sayers: | <i>Modern Banking</i> , Appendix on I.M.F. |
| 4. Robertson: | <i>Money</i> , Chs. 4 and 7. |

CHAPTER XXXV

INCOME AND EMPLOYMENT

THE PROBLEM

Kinds of unemployment. One of the fundamental aims of economic policy is full employment. There are many factors which give rise to unemployment. Economic life is dynamic, so that demand for the products of some industries is rising and of others is falling. Shifts of labour from industry to industry take time. During the interval workers remain without jobs. This is *frictional unemployment*. Secondly, an industry may be experiencing a fall in demand and the workers may not shift to other industries, because the latter offer lower wages or require a special training. It may even be that they do not change over in the hope that demand in the industry, in which they have been working, would soon revive. Such is the *structural unemployment*. Thirdly, there may be *voluntary unemployment*, which refers to those men who are unwilling to work at the prevailing rate of wages, or at any rate of wages. We are here concerned with none of these types. We shall treat of only the *involuntary unemployment* which means unemployment of workers who cannot find jobs though they are prepared to accept the prevailing rate of wages, or even or a little lower rate.

Inadequacy of partial equilibrium analysis. Partial equilibrium analysis is incompetent to diagnose the causes of this malady. It assumes that changes in the rate of wages paid to the workers in the industry in question do not reduce the demand for its product. With reduction in wages, cost is reduced. This enables the entrepreneurs to lower the price and thus sell a larger amount. More is produced and, hence, more workers are employed. Thus a cut in wages in an industry results in increased employment in that industry. But when there is a general cut in the wage rate, the assumption that demand for goods in general remains unchanged is not permissible. A general cut in wages is bound to adversely affect demand for goods in general, and, hence, the demand for labour.

Moreover, partial equilibrium analysis treats money as a veil. This analysis is done in "real" terms. General equilibrium analysis, on the other hand, must take account of the fact that money income cannot only be spent on goods; it can also be hoarded. If it is spent, it creates a demand for goods of one kind or another. If it is hoarded, it serves only as a store of value for the period during which it remains hoarded.

An assumption. Aggregate employment is a function of aggregate output. But the relation is not one of exact proportionality. In other words employment increases when output increases, but there is no reason to believe that if output is doubled, aggregate employment must

also be doubled. It will, however, facilitate discussion if we assume a relation of direct proportionality between the two. It will prove a very helpful simplification.

CLASSICAL THEORY OF EMPLOYMENT

Say's law. Classical economists, among whom the names of J.B. Say, David Ricardo, and J.S. Mill need specially be mentioned, held the view that general glut or overproduction is impossible. This view was based on what is known as Say's "law of market". It is difficult to find a clear statement of the law in Say's own writings. One sentence is, however, significant. When translated from the original French, it reads: "It is production which creates market for goods." Every producer sells his product for the goods which he requires. Hence every supply creates demand. If over-supply is not possible, how can general unemployment be possible?

Mill's exposition of the law. A fine elucidation of this law is found in Mill's "Principles of Political Economy".¹ He says that there are two possible reasons why demand should fall short of supply. First, people may not possess enough purchasing power. Second, they may not have the desire to utilise their purchasing power. As regards the former he says:—

"All sellers are inevitably and *ex vi termini* buyers. Could we suddenly double the productive powers of the country, we should double the supply of commodities in every market, but we should by the same stroke double the purchasing power. Everybody would bring a double demand as well as supply. . . . It is probable, indeed, that there would now be a superfluity of certain things. Although the community would willingly double its aggregate consumption, it may already have as much as it desires of some commodities. . . . If so, the supply will adapt itself accordingly. . . . At any rate, it is a sheer absurdity that all things should fall in value, and that all producers, in consequence, be insufficiently remunerated."²

Regarding the second, he takes the case of a foreigner entering the economy and writes:

"The new-comer brought with him into the country a demand for commodities, equal to all that he could produce by his industry, and it was his business to see that the supply he brought should be suitable to that demand. . . . We saw before that whoever brings commodities to the market, brings an additional power of purchase; we now see that he brings also an additional desire to consume; since if he had not that desire, he would not have troubled himself to produce."³

1 Ashley edition, pp. 558-62.

2 *Ibid.*, p. 558.

3 *Ibid.*, p. 559.

Production can thus not be excessive though it can be ill-assorted. It may be objected that some persons produce and accumulate. But such persons invest their savings productively. So they make over the surplus purchasing power to the labouring class. The latter will either spend the purchasing power or finding that their wages have risen, work less so that production diminishes.

Mill, however, does allow an excess of all commodities over money demand in periods of commercial crises. In that case everybody will be a seller and there will be very few buyers. But such crises result from excess of speculation and not from excess of supply. And the remedy is not a reduction of supply but the restoration of confidence.

Hence general glut cannot occur. Partial gluts are possible but forces at work remove disequilibrium in due course. Full employment is the normal situation towards which actual situation always gravitates.

Pigou's version. Say's law and Mill's exposition of it are couched in the language which is apt for a society in which a typical worker is self-employed, so that workers sell their products, not labour. Products are, in the ultimate analysis, exchanged for products. Supply creates its own demand. And employment for a worker means ability to find a market for his product.

In modern society, most workers are wage earners. To be employed means to work for others for a wage. Pigou has reconstructed the classical theory to make it applicable to labour market.⁴ According to him, given the demand conditions for labour, wages will come to stand at such a level that all workers are employed. Whatever unemployment exists, it is either due to changes in conditions of demand or due to frictions of imperfect market. Full employment is a matter of automatic adjustment. Hence if the government of a country takes steps to improve conditions of demand for labour, it does not provide any remedy against unemployment. For even if they did not take any steps, full employment would occur if conditions of demand stopped fluctuating. State of demand, therefore, does not matter. What really cause unemployment are changes in demand. In other words, there cannot be any involuntary unemployment. There can only be frictional unemployment. Using algebraic language, he says:

$$N = \frac{qY}{W},$$

where,

N is the number of workers employed,

Y is national income,

q is proportion of Y paid as wages.

and, W is wage rate.

N can always be increased by a reduction in W . In fact, W will so adjust itself that N just equals the total number of workers.

KEYNES' VIEWS ON CLASSICAL THEORY

Three allied assumptions. The Pigovian approach is based on a number of assumptions. Three of these assumptions are such as, though they appear to be separate, are in fact allied. Keynes goes to the extent of holding that these three assumptions "all amount to the same thing in the sense that they all stand and fall together, any one of them logically involving the other two."⁵

1. *Real wage equals marginal disutility of employment.* One assumption is that wage rate is equal to marginal disutility of existing employment. In other words, every person works such number of days *per year* that disutility of marginal day's work equals real wage *per day*. If real wage rises, workers would work for more days till again marginal disutility of work equals real wage rate.

There are two objections against this assumption. The first is regarding the behaviour of labour. If we accept the above assumption, we then accept that supply of labour would fall if there is a fall in real wages. Now, a fall in real wages may result from a fall in the money wage, price level remaining the same. Or, it may result from a rise in the price level money wage remaining the same. Supply of labour does respond to changes of the former kind. But the assumption, that workers will reduce their supply of labour every time there is a small rise in the cost of living, is contrary to experience.

The second objection is more fundamental. To assume that workers equalise real wage and marginal disutility of work, is to assume that they bargain for real wage. Wage bargains between employers and workers are in respect of money wages and not real wages. The fact of the matter is that there is no method by which the labouring class can fix their own real wage. They have no power to bring money wage to such a level that its value conforms to marginal disutility of work.

The classical economists⁶ never attempted to analyse how bargains for money wage influence real wage. Probably they considered it unimportant. They seem to have held that price level depends on the quantity of money and not on the rate of wages. That their theory could hold sway for such a long time can be explained only by the fact that no serious attempt was made to analyse the relation between changes in general level of money wages and of real wages.

2. *Impossibility of involuntary unemployment.* The second assumption is that there can be no involuntary unemployment. This assumption is an obvious corollary of the first assumption. To assume that workers supply labour upto where wages equal marginal disutility of

⁵ *The General Theory of Employment, Interest and Money*, p.22.

⁶ The term, as used by Keynes, includes Marshall and Pigou in addition to Say.

work, is also to assume that if there are any unemployed workers, they are voluntary. That is, unemployment exists only because the unemployed refuse to work unless wage rate is higher. Even frictional or structural unemployment is compatible with their theory, but involuntary unemployment cannot exist, or at least cannot persist.

This is again contrary to experience. In periods of depression there are large number of workers who fail to secure employment, even though they are prepared to work, not only for the current wage, but even at a lower wage rate. Their unemployment is neither frictional, not structural, nor voluntary. And neither are workers more truculent nor less productive in a period of depression than in a boom. Classical theory fails to recognize the fact of involuntary unemployment.

3. *Supply creates its own demand.* The third assumption of Pigovian analysis is Say's law, viz. that supply creates its own demand. The implication of this law may be stated as follows: Costs of production of aggregate output are earned as incomes. These incomes are either spent or saved. Those which are spent constitute demand for consumption goods. Those which are saved create demand for investment goods. Aggregate costs are the aggregate supply price. Aggregate outlays are the aggregate demand price. The two are always equal. Thus, supply creates its own demand means that aggregate supply price and aggregate demand price are equal for all levels of output. There is then no reason why output should not switch itself to the level of full employment.

That this is a wrong assumption can be understood only when we have studied, at least briefly, Keynes' theory of employment. We will now give a summarised treatment of this theory.

KEYNES' PRINCIPLE OF EFFECTIVE DEMAND

The level of employment in a country depends on conditions of aggregate demand and aggregate supply. Hence concepts of aggregate demand and aggregate supply curves (functions) are fundamental to Keynes' analysis.

Aggregate demand function. Aggregate demand curve, strictly speaking, is the curve relating expected sale proceeds with various volumes of output. But Keynes defines it as the curve relating various quantities of employment with sale proceeds which their outputs are expected to yield. There are three possible justifications for it. First, he is interested in tracing the determinants of employment rather than output. Second, output and employment—in the short period when techniques and resources can be taken as given—are positively related, both increasing and decreasing together. Third, there is no physical unit in terms of which quantities of all commodities can be expressed, therefore amount of labour employed is used as an index of size of the output.

When we draw the demand curve for a commodity, we represent price *per* unit on the vertical axis and the quantity expected to be

demanded on the horizontal axis. The aggregate demand curve differs from such a curve in two respects. First, on the vertical axis is shown not price *per* unit but the total price of aggregate output. Secondly, on the horizontal axis is shown not the size of the output but the amount of employment to which that output gives rise.

From different volumes of employment, the sale proceeds which entrepreneurs expect to receive from the sale of corresponding outputs are different. With zero employment expected sale proceeds will be zero. As more labour is employed, output produced is larger and expected sale proceeds are greater. Hence larger sale proceeds are associated with larger employment and *vice versa*. Aggregate demand curve, therefore, starts from the origin and slants upwards to the right. It is worth noting that aggregate demand curve slants up to the right in contradistinction to demand curve for a commodity which slants down.

Aggregate supply function. There is a certain minimum amount of sale proceeds which employers, all taken together, must get to produce a given volume of output. This is the supply price of that output. The supply price for different outputs is different. Once again, strictly speaking, an aggregate supply function or curve should relate various volumes of output with their supply prices. But, for reasons given above, it is better to define it as the curve relating supply prices of various outputs to the amounts of employment to which those outputs give rise. Thus along the vertical axis are shown supply prices and along the horizontal axis are represented amounts of employment.

Supply price of a given aggregate output, being the minimum which entrepreneurs must get to produce it, equals the cost of that output. An individual entrepreneur includes in his cost payments on account of services of factors used; values of materials used and depreciation of assets through use; and his own minimum return. These three items are respectively called factor cost, user cost, and normal profit. Now, in calculating aggregate cost of the whole output, user cost must be excluded because otherwise it would be either counting many costs more than once, or it would be counting values which do not create incomes. Producers of materials, for instance, have included their values in their costs, so users of materials need not include them when the purpose is to find aggregate cost.

With zero sale proceeds, output and employment will also be zero. Larger outputs will be produced only for larger sale proceeds. This means that higher amounts of employment are associated with larger sale proceeds. In other words, aggregate supply curve, like aggregate demand curve, starts from the origin and slants up to the right.

When no more workers are available for employment; further increase in sale proceeds will be associated with the same amount of employment. That is after a point aggregate supply curve will be vertical.

Effective demand. In Fig. 35.1, employment is represented along x-axis and sale proceeds along y-axis. D is the aggregate demand curve and Z the aggregate supply curve. The former shows sale proceeds *expected* from various levels of employment, and the latter shows sale proceeds *necessary* to induce different volumes of employment.

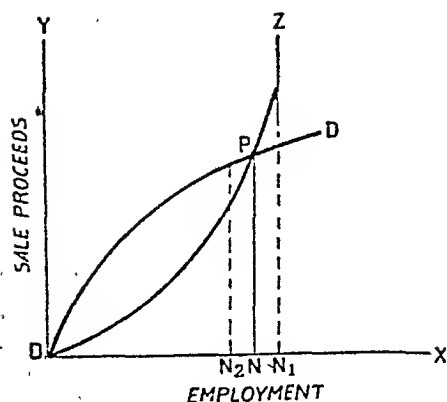


Fig. 35.1

employment more than ON , say ON_1 , expected sale proceeds fall short of the supply price. Profits will be less than normal (or even negative). On the other hand, with employment less than ON , say ON_2 , expected sale proceeds stand above the supply price. There will be an inducement for entrepreneurs to employ more persons. Thus there will be no equilibrium unless employment stands just at ON .

Evidently, then, at any given time, there is only one level of employment at which equilibrium will be established. This is the point at which aggregate demand price equals aggregate supply price. The point on the aggregate demand curve, where it is intersected by the aggregate supply curve, is called the point of effective demand. Employment is determined by effective demand and equilibrium established by effective demand is not necessarily at the level of full employment.

Further elucidation. Aggregate supply function depends mainly on the physical conditions of supply. Considerations relevant to it are quantities and qualities of available factors of production and state of knowledge and technique. These are topics which we have already discussed. Keynes rightly holds them as familiar topics and, taking aggregate supply function as given, discusses aggregate demand function in details.

Aggregate demand function relates expected sale proceeds to employment. Expected sale proceeds may be split up into sale proceeds of consumption goods and sale proceeds of new investment goods. If D is the aggregate demand, D_1 the demand for consumption goods, and D_2 the demand for investment goods, then:

$$D = D_1 + D_2$$

As total employment arises out of demand for consumption goods

The point of effective demand will be on 45° line. It will be that point where investment equals the difference between consumption expenditure and income. For instance, if investment is $P'L'$, then income will be OM' (i.e. $P'M'$). Expenditure on consumption will be $M'L'$, and employment will stand at the level corresponding to income OM' (or $P'M'$). If OM is the income corresponding to full employment, then full employment will be attained if investment happens to be PL .

Contrast with classical view. J.B. Say had held that, since supply creates its own demand, aggregate demand price will be equal to aggregate supply price for all levels of output. If we were to redraw Fig. 35.1 on the assumption of Say's law, then our curves D and Z would coincide for all levels of employment. There being no bar to full employment, competition among entrepreneurs would lead to expansion of employment till there is no involuntary unemployment. But the assumption of coincidence of the two curves throughout their lengths is invalid.

The two approaches can be more clearly contrasted with the help of Fig. 35.2. Say's law assumes that investment outlay will always stand at such a level that full employment is achieved. There is, however, no reason to believe that it will be so. Investment is determined by profit expectations from investment and the rate of interest.⁷ It does not in any significant manner depend on national income. Increase in employment (and income) may not by itself lead to an increase in investment. If investment does not increase appropriately, increase in employment cannot maintain itself. It will reduce itself to a level at which $D_2 = Z - D_1$.

Defect in the Pigovian formula $N = \frac{qY}{W}$ can now be exposed.

This formula assumes that N , i.e. employment, can be increased by reducing W . This assumption can be criticised on two grounds. First, taking into account the conditions which obtain in the world today, it is incorrect to assume that wage rates are flexible. Trade unions are strong enough everywhere to resist wage cuts. The second objection is more fundamental. The assumption implies that changes in W leave Y unchanged. But that is not so. When wages fall, expenditures are reduced and incomes fall. In other words, with a fall in W equilibrium will come about at a new level of income. Employment can then increase only if q increases as a result of substitution of labour for other factors. In one word, primary determinant of employment is Y and not W , and when W is reduced Y falls as a result of which employment is apt to decrease rather than increase.

SAVING EQUALS INVESTMENT

Definitions. Since Keynesian economics is that of aggregates, terms saving and investment are used with reference to the whole community. Investment means creation of new assets or addition to the existing

⁷ See below.

stock of real capital. Investment by an individual does not necessarily mean social investment. For instance, when a man acquires an old investment good—security, equity, or cash—someone else must part with the investment good. The latter will have dis-invested an equal sum and the two cancel out completely.

Saving is the excess of income over consumption. An act of saving on the part of an individual does not necessarily lead to social saving. If his saving is not matched by investment, his failure to spend reduces incomes of others and, hence, their ability to save. That is, though he saves more, others will save less and on the whole there may be no saving. In calculating aggregate saving of the community, we must take into account not only savings but also dis-savings.

A fundamental principle. One fundamental principle in Keynesian economics is that saving is always equal to investment. This, according to him, is so by definition.⁸ For,

$$\begin{aligned} \text{Income} &= \text{Value of the Output} \\ &= \text{Consumption} + \text{Investment,} \\ \text{or,} \quad Y &= C + I \end{aligned}$$

$$\begin{aligned} \text{Also,} \quad \text{Saving} &= \text{Income} - \text{Consumption} \\ \text{or,} \quad \text{Income} &= \text{Consumption} + \text{Saving} \\ \text{i.e.} \quad Y &= C + S \\ \text{Hence,} \quad I &= S \end{aligned}$$

Those who save make their decisions independently of those who invest. Saving at any given time depends on the level of income. Investment, on the other hand, does not, in any significant manner, depend on income. It depends on profit expectations from investment and rate of interest. Thus the two sets of decisions regarding saving and investment are made independently of each other. Yet equality between the two is brought about by changes in income. When investment increases, it leads to more employment. Output and income rise. A rise in income increases the community's ability to save. Income rises to such a level that saving out of it equals the increased investment.

Diagrammatic exposition.

The above principle, that saving and investment must always be equal, can be well explained with the help of Fig. 35.3. In this diagram, investment is supposed to be completely

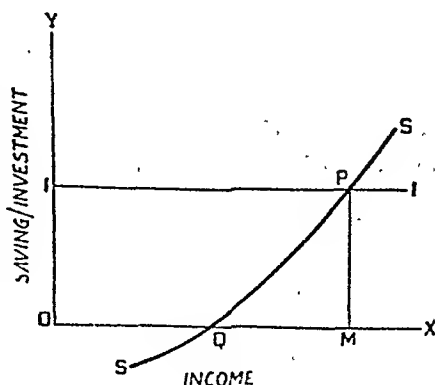


Fig. 35.3

⁸ "General Theory", p. 63.

independent of income.⁹ *II* shows the investment. Upto income *OQ*, saving is negative. As income increases beyond *OQ*, saving increases at a progressive rate. When income is *OM*, saving and investment are equal. Investment *I* raises income to the level of *OM* so that saving comes upto the level *PM*.

Difference between planned saving and investment. Though actual saving and actual investment must be equal in any period, planned saving may differ from planned investment. When the community plans to invest more than it plans to save, there will be an increase of income. Realised income being higher than expected, people may spend more or save more. If they save more, actual saving will be more and will equal investment. If they spend more, dealers will be left with smaller stocks than they had thought, so that investment comes down to the level of saving. Or, it may be that there is some increase in saving and some reduction in investment from the planned levels and the two are equal. Conversely, when planned saving exceeds planned investment, income will fall and, by consequent changes in saving and consumption, an adjustment will be brought about. In any case, income so adjusts saving and investment that their realised amounts are equal.

MARGINAL PROPENSITY TO CONSUME

Meaning of propensity to consume. We have already noted that aggregate demand is constituted of expenditure on consumption goods and outlay on investment goods. The chief determinant of expenditure on consumption at any given time is income. The relation between the two variables is called propensity to consume. Propensity to consume, therefore, is a schedule or statement showing expenditures on consumption at various levels of income. The following is a part of an imaginary schedule of propensity to consume.

TABLE XXXVa

		Rs. Crores.
Income	Expenditure on consumption	
100	95	
110	103	
120	110	
130	115	

Curve representing such a schedule, that is the one showing the relation between income and consumption, is called consumption function. As income increases, expenditure on consumption increases. Consumption function, therefore, slants up to the right.

⁹ In fact investment is not entirely independent of income, because when income rises, better techniques become available and efficiency increases. So promise of profits increases which raises investment and incomes.

There are other determinants also of expenditure on consumption. These may be classified into subjective factors and objective factors. In the former category are included all those considerations which weigh with individuals in deciding how much to save. We have already studied these factors under the heading capital formation. Objective factors are windfall gains, changes in expectations, changes in the rate of interest and in fiscal policy. These factors are important from the long-run point of view. In the short run, it is only violent changes in these factors which can change propensity to consume.

In the short run, the chief determinant of propensity to consume is income. As already observed, relation between the two is depicted by a curve, called the consumption function. Changes in income lead to changes in the amount of consumption which can be read off on the consumption function. But changes in other determinants of consumption change the propensity to consume at various levels of income. Such changes, therefore, cause a shift in the consumption function.

Marginal propensity to consume. A change in income leads to a change in expenditure on consumption. Marginal propensity to consume of a given income is the (small) change in consumption expenditure divided by the corresponding (small) change in income. In our table above when income rises from Rs. 100 crores to Rs. 110 crores, expenditure on consumption increases from Rs. 95 crores to Rs. 103 crores. In other words, marginal propensity to consume is $8/10$. Similarly when income is Rs. 120 crores, marginal propensity to consume is $5/10$.

Keynes holds on the basis of "normal psychological law" that when income changes, consumption also changes in the same direction but not by as much. In other words, the whole increase in income is normally not spent on consumption: marginal propensity to consume is less than unity.

Now, every increment in income is divided between consumption and investment. Hence if marginal propensity to consume is less than unity, marginal propensity to save must be positive. This can be shown algebraically;

$$\delta Y = \delta C + \delta I$$

$$\text{Or, } \frac{\delta C}{\delta Y} + \frac{\delta I}{\delta Y} = 1$$

As $\frac{\delta C}{\delta Y}$, the marginal propensity to consume, is less than unity, $\frac{\delta I}{\delta Y}$, the marginal propensity to invest, must be positive.

THE MULTIPLIER

Meaning. Mr. R.F. Kahn was the first economist to introduce the concept of multiplier in economic theory. In his article "The Relation of Home Investment To Unemployment",¹⁰ he defined

¹⁰ *Economic Journal*, June 1931, p. 173.

multiplier as a coefficient relating an increment of primary employment to total employment caused by a given investment. Suppose, for example, the government spends Rs. 1 crore on public works. Some employment is thus created. This is primary employment. A part of incomes created by this expenditure will be spent by the recipients which will give rise to further employment and incomes. This process proceeds on till the "wave" has spent itself out. Hence the total increase in employment is more than the primary employment caused by the expenditure. For instance, if N is the total increase in employment and N_1 the primary employment, then ;

$$N = KN_1$$

where K is the employment multiplier.

Keynes replaces the concept by that of an investment multiplier, which is the coefficient relating an increment of investment to total increment of income caused by it. If Y is the income, I the investment, and k the multiplier, then ;

$$Y = k \times I \quad \text{or, better still, } \delta Y = k \times \delta I$$

The same amounts of sales receipts will cause different amounts of employment with different techniques. K and k are, therefore, different. But on our assumption that in the short run relation between income, output and employment is one of proportionality, K and k will be equal.

Relation with marginal propensity to consume and save. A new investment (of, say, Rs. 1 crore) by the government will immediately create incomes worth the same amount. How much will be the secondary increase in incomes, depends on what proportion of new incomes is spent on consumption, i.e. on the marginal propensity to consume. Higher the marginal propensity to consume of the primary income recipients, more will be the secondary incomes. Similarly, higher the marginal propensity to consume of the recipients of the secondary incomes, larger will be the tertiary incomes, and so on.

When marginal propensity to consume is zero, new incomes will not be spent further, so that $k=1$, and total increase in incomes is equal to the primary increase. On the other hand, if marginal propensity to consume is unity, all new incomes will be spent so that aggregate increase in incomes will be infinite.

Let us take a simple arithmetical illustration. Suppose marginal propensity to consume is $9/10$, and remains the same throughout all stages of diffusion. Then an investment of one rupee will increase incomes by :

$$1 + \frac{9}{10} + \left(\frac{9}{10}\right)^2 + \left(\frac{9}{10}\right)^3 + \left(\frac{9}{10}\right)^4 + \dots \infty = 10.$$

This is the multiplier. Incidentally, this arithmetical example brings out an important fact. When marginal propensity to consume is $9/10$, marginal propensity to save is $1/10$, and the multiplier is 10.

Hence investment multiplier is the reciprocal of the marginal propensity to save.

Significance. The concepts of marginal propensity to consume and the investment multiplier are thus directly related. Their importance in guiding government policy is obvious.¹¹ The purpose in depression, for instance, being to increase incomes, investments must be made in such a manner that investment multiplier comes to be high. In other words, the government must endeavour to create incomes for, or to add to the incomes of, those who have a high propensity to consume. Otherwise, multiplier effect will be small and large investment will become necessary to bring about given desired result.

It must also be noted that in such periods the primary guide in the choice of avenues of investment is multiplier effect rather than utility or profitability of the works undertaken. Investments may be preferred in, say, digging holes and filling them up to that in an income-yielding asset, just because multiplier effect in the former is much greater than the same in the latter.

INDUCEMENT TO INVEST

Investment means producing more than is consumed. It may take the form of increase in the stocks of finished goods, but its more important form is manufacture of machines and tools and construction of buildings. There are two determinants of investment, *viz.* marginal efficiency of capital and the rate of interest. We have already studied Keynes' liquidity preference theory of interest. Let us consider the other determinant of investment.

Marginal efficiency of a particular asset. It is better to start with marginal efficiency of a particular type of asset to an individual. It may be defined as the *expected rate of return* from an additional unit of such an asset. Calculation of this rate of return is interesting. Let us suppose that the asset under consideration is a kind of machine which, let us assume for simplicity, has a life of three years. Further suppose that the machine is expected to yield returns R_1 , R_2 , and R_3 , respectively in three years. The following points need be understood,—

1. R_1 , R_2 , and R_3 exclude running expenses but include depreciation of the machine.

2. It is not necessary that R_1 , R_2 and R_3 are equal. In fact most probably they will not be equal. Ordinarily the returns will diminish progressively because, as time passes, the machine wears out. But it is possible that business conditions are expected to improve with the passage of time and, therefore, the *expected* returns increase progressively.

3. $R_1 + R_2 + R_3$ is cost of the asset *plus* earning from the asset. Earning from the asset refers to the rate of interest expected

11 What follows regarding depression is true, *mutatis mutandis*, of booms also.

to be earned on the investment. If R_1 , R_2 , and R_3 are discounted at this rate, then the sum of the three discounted values will equal the cost of the asset. This rate, at which expected yields, or what Keynes calls "prospective yields", must be discounted to make the balance equal to the cost of the asset, is the marginal efficiency of this asset. In other words, marginal efficiency of a particular type of asset is the expected rate of earning from a marginal unit of that asset.

4. Cost of the asset does not mean its market value but its replacement cost, that is the cost incurred if a new unit of such an asset were produced.

It must be obvious now that if marginal efficiency of a particular asset exceeds the market rate of interest, the individual under consideration will invest more in that asset till its marginal efficiency equals the prevailing rate of interest. Similarly if marginal efficiency is less than the rate of interest, he will invest less in that asset.

Marginal efficiency of capital in general. Marginal efficiency of capital to the community at any given time is the highest rate of return which can be earned from investment on an additional unit of any kind of asset. It shows the return from an additional unit of the most remunerative asset.

As investment in any particular asset at a given time increases, its marginal efficiency diminishes on account of two reasons. First, more of this asset means more of the product produced by this asset and, hence, the price of the product is apt to fall. Secondly, as more of the asset is produced, its cost of production is apt to rise. Thus, on the one hand, the value of "prospective yields" ($R_1 + R_2 + R_3 + \dots$) falls and, on the other, replacement cost rises, so that *net* marginal earning from the asset falls. Hence marginal efficiency curve of a particular asset falls. As marginal efficiency curves of all individual types of assets fall, marginal efficiency curve of capital in general will also slant down towards the right.

Determination of investment. Investment is pressed up to the point where marginal efficiency of capital equals the rate of interest. In Fig. 35.4, x -axis shows investment and y -axis the marginal efficiency of capital. M is the marginal efficiency curve of capital. If the rate of interest is OL , investment will be PL or OQ . At a higher rate of interest investment will be less, and *vice versa*.

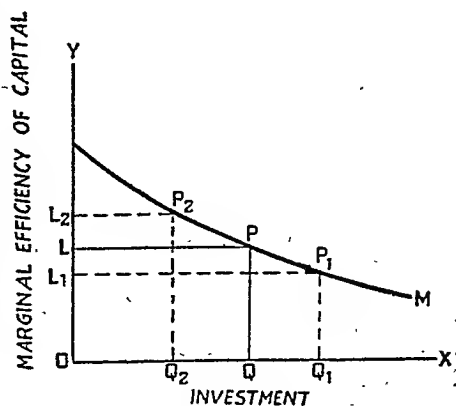


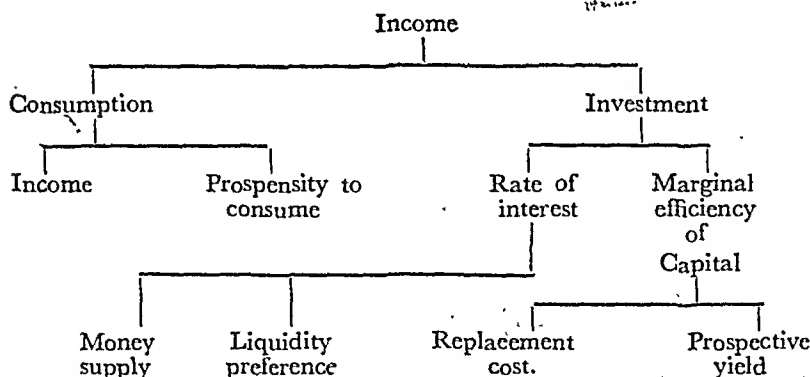
Fig. 35.4

Keynes uses the term marginal efficiency of capital in preference to other terms like marginal productivity or marginal utility of capital. This is because he wishes to stress that it is not the marginal return at any time but the entire series of returns of "annual prospective yields" which form the basis of calculation. It is this precarious basis, on which future yields have to be calculated, which is important. Not only economic, even political and other factors, enter into the picture. Moreover, stock exchange values play their part. Stock exchange values are determined by estimates of mass psychology or on the basis of existing conditions. Current conditions play an important part. When some change comes, it reacts violently on the views of the people.

Thus estimates about the prospective yields are based on multiplicity of factors. Most of these factors are unpredictable. Changes provide violent reactions. It is for all these reasons that these estimates are to a large extent responsible for bringing about phases of prosperity and depression.

DETERMINANTS OF EMPLOYMENT

Keynesian scheme of things. In Keynesian scheme of things, income is the chief determinant of employment in the short period. To trace the factors on which employment depends, we must find the determinants of income. The following picture gives a schematic statement of the determinants of income.



The three determinants of income obviously are propensity to consume, the rate of interest and marginal efficiency of capital. Let us consider them one by one.

Propensity to consume. If propensity to consume is increased, income will rise. But propensity to consume is determined by the habits of the people and habits are not easy to change. There is, however, one way out. Propensity to consume of every individual is a function of his income. The lower the income, the higher the propensity to consume, and *vice versa*. Hence propensity to consume

of the community as a whole can be increased by transferring incomes from the rich to the poor. This can be done by budgetary policies (*i.e.* by taxing the rich and spending the same to create incomes for the poor) or even by giving out doles to the poor.

Marginal efficiency of capital. Marginal efficiency of capital depends on expectations. It is comparatively easier to shake confidence of the people than to reinstate it. For instance, by ill-chosen taxation policies the government may succeed in alarming the people. But if the purpose is to revive optimism and faith in the future, the task is hard, if not impossible.

Rate of interest. Rate of interest appears to be the best front to attack. Of course, liquidity preference depends on psychological factors, but quantity of money available to the public may be increased so that the rate of interest falls and more investment projects promise to be profitable. We have, however, found in chapter XXXIII that interest rate policy is a fair weather friend. When the malady is desperate, *i.e.* when depression has sunk employment to very low levels and the gloom is deep, manipulations in the rate of interest may prove ineffective.

The effective method. The situation is, however, not as hopeless as it appears. The government can directly increase its expenditure. It is in a position to increase consumption as well as investment. And in the case of the latter, the government need not bother about the prospective yield. It can spend or invest in such a manner that multiplier effect is high. By giving doles or jobs to the unemployed and by handing over purchasing power to those whose requirements of even necessities are not being fully met, it can create or increase incomes for such groups of people whose propensity to consume is the highest. Of course, it has to be careful in its choice of investment in that it should not compete away private agencies. Otherwise, while public investment increases, private investment may decrease and results achieved may be far from what was planned.

Employment can be increased either by increasing consumption or by increasing investment. There are some people, like Prof. Hobson, who hold that depression results from insufficiency of expenditure on consumer goods out of incomes. They find the explanation for depression in under-consumption. According to them there is no other method of increasing employment except by increasing consumption. Keynes differs from this view. He holds, in the first place, that this school of thought fails to realise that employment can be increased as much by increasing investment as by increasing consumption. Moreover, Keynes is impressed by "the great social advantages of increasing the stock of capital until it ceases to be scarce".¹² Keynes, therefore, holds that it is wise to tackle the problem from both fronts simultaneously. While investment is increased, efforts must be made to increase propensity to consume. And, he adds, there is room for both policies to operate together.

¹² *Ibid.*, p. 325.

Further Readings :

1. J.S. Mill : *Principles of Political Economy*, Bk. III
Ch. 14.
2. Pigou : *The Theory of Unemployment*.
3. Keynes : *The General Theory of Money, Interest and
Employment*.
4. Hansen : *Guide to Keynes*.

Inter-regional and International Trade

INTER-REGIONAL TRADE

INTERNATIONAL TRADE—THE CLASSICAL CONCEPT

Internal trade and international trade. Classical economists like Ricardo and Mill considered international trade and internal trade as two different species of trade. They defined international trade as trade between peoples living in different countries in contradistinction to internal trade which is trade between people living in the same country. The distinction obviously rests on the basis of political boundaries in that while international trade crosses the political frontiers of a country, internal trade does not. Having thus distinguished between the two, they advanced a separate theory to explain the existence and direction of international trade. It is known as the theory of comparative costs. Formulation of a new theory can be justified only if international trade differs *fundamentally* from internal trade. Let us see in what respects they resemble or differ.

Resemblance. It was realised by classical economists that international trade resembles internal trade in some respects. Like the latter, it implies exchange of goods and services. In both kinds of trade, money may serve as a go-between, but ultimately all transactions boil down to exchange of goods for goods, of services for services, or of goods for services. Secondly, as in internal trade, so in international trade the parties involved are the people. Of course, trade treaties are concluded between governments, promising to import or export specified amounts of specified goods. But when governments sign such trade treaties, they in most cases promise only to facilitate or encourage the specified imports or exports; they do not undertake to import or export themselves. That does not mean that governments never export or import. Every government does import many of its own requirements. In this capacity a government is, however, only one of the dealers. International trade is not a trade between countries nor one between nations; a small part of it is between governments, but most of it is between the peoples. Lastly, international trade, like internal trade, is constituted of voluntary transactions. The government may prohibit trade in certain goods or it may impose (or increase or reduce) restrictions, but it does not compel dealers to purchase any kind of goods. People purchase foreign goods only when they desire to do so.

Differences. None could ever seriously claim that international trade differs from internal trade in that the former is long distance trade while the latter is short distance trade. Trade between Amritsar and Lahore involves a much shorter distance than trade between Amritsar and Madras, and yet the latter is internal trade while the former is international trade.

Some people have put forward the plea that international trade has to be treated separately from internal trade, because the people of a country are always more particular to know their trade relations with other countries than with other parts of their own country. Now, this attitude of the public may justify a separate compilation of foreign trade statistics, but it does not mean that a separate theory will explain this type of trade. A separate theory is needed only if the very character of the trade is different.

Internal trade involves the use of one currency, the domestic currency. An international transaction, on the other hand, involves the use of two currencies, the domestic currency and a foreign currency. This gives rise to an additional step, *i.e.* the conversion of one currency into another. But whereas this does make a difference, the difference is not fundamental. The process of trade is made a little more complicated, but the complexion of the trade is not changed thereby in any essential manner. It continues to remain an exchange of goods and services, in the ultimate analysis.

Classical economists raised one point of distinction which they considered fundamental. It relates to mobility of factors of production. They pointed out that factors of production move from one part of a country to another part with a much greater ease than from one country to another. In technical language, international mobility of factors of production is very low while internal mobility is high. Hindrances to international mobility of labour and capital have often been enumerated. Labour's mobility from one country to another is low because of differences of language and customs, general distrust of the foreigner, property laws, racial segregations, etc. etc. Similarly, international mobility of capital is low because of the difficulties of keeping a watch over assets, exchange difficulties, wars, blocked accounts, frozen assets, etc. etc. Classical economists realised that the difference between international and internal mobility of factors of production is one of degree. They, however, held that the difference of degree is so great that it is almost a difference of kind. On this basis they made an assumption, *viz.* that factors of production are perfectly mobile within a country and perfectly immobile across its frontiers. It is this difference which provided a justification for a separate theory of international trade. On the assumption of international immobility of factors, they built their theory of comparative costs.

INTER-REGIONAL TRADE—THE MODERN CONCEPT

Unsuitability of classical distinction. The classification of trade into internal and international trade does not rest on a truly scientific basis. In defining the two kinds of trade the classical economists distinguish between them on the basis of political boundaries. On the other hand, when they come to name the fundamental difference between the two, it is found in the mobility and immobility of factors. One basis of distinction is political and the other economic. And the two do not always give the same conclusion. Large numbers of labourers and huge

amounts of capitals have moved between countries in the past. Consider for example, the number of Indians in Burma, Ceylon, Africa, Australia, etc. Also consider the extent of British, American, French and Dutch investments in Eastern countries. If international mobility of factors is not zero, internal mobility of factors is not perfect either. For instance, there are many physical and psychological hindrances in the way of movements of Punjabi families to Madras and of Madras families to the Punjab. Mobility of factors is, thus, not co-terminus with political boundaries. *All* international trade cannot be distinguished from *all* internal trade on the basis of immobility of factors. We must, therefore, choose between the two criteria and decide whether classification of trade is to be made on political basis or on economic basis.

Evidently, as students of economics we are concerned with the economic distinction, *i.e.* the distinction based on mobility and immobility of factors. For this reason, economists like Ohlin and Duncan have suggested that it is inadvisable to classify trade into internal and international trade. They hold that classification, appropriate to our purpose, will be a distinction between regional and inter-regional trade.

Regional and inter-regional trade. Thus for economic analysis, the concept of "region" is more appropriate than the concept of "nation." A region is defined as an area within which factors of production move with perfect ease but across it they do not move at all. Obviously, the frontiers of a region are neither geographical nor political, but economic. A region thus defined, theory of comparative costs will be applicable to inter-regional trade. Theory of comparative costs will apply wherever there is immobility of factors. There may be immobility between two countries. If factors of production do not move between country *A* and country *B*, then country *A* is one region and country *B* another, and trade between their peoples will be inter-regional trade. Similarly there may be immobility between different parts of the same country or even between different groups in the same area. If trade unionism or guild system is so strong that movement from one occupation to another is impossible, then trade between people belonging to different occupations is inter-regional trade. Similarly, if caste system is so rigid in a country that there can be no movement of labour between, say, shoe-makers and furniture-makers, then the trade between such communities will be of the nature of inter-regional trade. We may, therefore, define inter-regional trade as trade between non-competing groups.

The phrase "international trade" is thus replaced by another, more appropriate to economic discussion, namely "inter-regional trade". Instead of trying to formulate a theory of trade between two different political areas, we study trade between two economic regions which are distinct from each other because factors of production in the one do not compete with factors of production in the other. Theory of comparative costs explains the existence and direction of inter-regional trade.

THEORY OF COMPARATIVE COSTS

This theory was first formulated by David Ricardo and was later on further developed by Mill and Marshall. The theory is accepted today with the difference which has already been mentioned, *viz.* that it is a theory which explains the existence and direction of inter-regional trade rather than international trade.

Statement of the theory. Theory of comparative costs embodies two truths, one concerning the existence of inter-regional trade and the other regarding its direction. About the first, it says that difference in comparative costs is an essential as well as the only condition for the existence of inter-regional trade. That is, there will be no inter-regional trade if there is no comparative difference in costs. And inter-regional trade will be in existence if there exists such a difference—no other condition need be fulfilled. About the direction, the theory states that a region will produce those goods in which it has less comparative costs. It means, as we shall explain presently, that in the production of those goods it has either a greater comparative advantage or a less comparative disadvantage.

Assumptions. To explain this theory it is customary to make many simplifying assumptions. These are:—

1. There are only two regions, call them country *A* and country *B*.
2. There are only two commodities, call them *x* and *y*.
3. There is only one factor of production, call it labour, and let one labour-day constitute a "productive unit."
4. Both the commodities, *x* and *y*, are produced under conditions of constant costs in both the countries.
5. Labour-cost theory of value is valid, *i.e.* exchange value of a commodity depends on the labour employed to produce it.
6. All exchanges are made direct, that is barter system prevails and money is not used at all.
7. Trade between the two countries is free, *i.e.* there are no restrictions, whatsoever, on the movement of goods between the two countries.
8. There are no costs of transporting goods from one country to the other. This implies absence of carrying costs, and insurance and banking charges, etc.
9. The market is perfect, so that there is only one exchange ratio for all inter-regional transactions.

May it be noted that these are all only simplifying assumptions, made to facilitate understanding. They are not fundamental to the

argument. The only assumption fundamental to the argument is that of inter-regional immobility of factors of production.

Three cases. Three cases will be considered to establish the validity of the two propositions of the theory of comparative costs.

Case I

	Country A	Country B
One productive unit produces	5x or 15y	10x or 10y
Exchange ratio before inter-regional trade	$x : 3y$	$x : y$

Country A can produce y cheaper, while country B can produce x cheaper. That is, country A has an absolute advantage in the production of y but an absolute disadvantage in the production of x . Hence comparatively speaking, she has an advantage in producing y . Similarly country B has a comparative advantage in producing x .

A producer in country A, rather than producing 5x, will produce 15y and exchange it for 15x in B. Hence nobody in country A will produce x . Similarly a producer in country B, rather than producing 10y, will produce 10x and exchange it for 30y in country A. Hence nobody in country B will produce y .

In the above argument we have assumed the exchange ratio to be $x : y$ for producers of country A and $x : 3y$ for producers of country B. That cannot be as the market is perfect. There will be only one exchange ratio, lying somewhere between these two ratios. Let us suppose that the ratio of exchange in the inter-regional market is $x : 2y$. Our conclusion is still valid. A producer in A, rather than producing 5x, will produce 15y to exchange it for $7\frac{1}{2}x$. Similarly a producer in B, rather than producing 10y, will produce 10x to exchange it for 20y. Thus in country A only y is produced, and in country B only x is produced.

This case, however, does not lead us to any definite conclusion. Country A produces y in which it has an absolute as well as a comparative advantage. Similarly with country B. We cannot decide whether absolute cost advantage is the real determinant of inter-regional trade or comparative cost advantage. So we pass on to the next case.

Case II

	Country A	Country B
One productive unit produces	15x or 20y	10x or 10y
Exchange ratio before inter-regional trade	$3x : 4y$	$x : y$

Country *A* can produce both *x* and *y* cheaper than country *B*; that is she has an absolute advantage over *B* in the the production of both. But, obviously, her advantage is greater in the production of *y* than of *x*¹. Similarly country *B* has an absolute disadvantage in both, but her disadvantage is less in the production of *x* than of *y*². Thus country *A* has comparatively greater advantage in *y*, while country *B* has comparatively less disadvantage in *x*. If absolute differences in costs determine the direction of interregional trade, then country *A* will produce both. If comparative differences determine it, then country *A* will produce *y*, while country *B* will produce *x*. Let us see.

A producer in country *A*, rather than producing 15*x*, may produce 20 *y* and exchange it for 20*x* in country *B*. Hence it is not in the interest of producers in this country to produce *x* even though there is an absolute advantage over producers of the other country in producing it. They would do better if they import *x*. The case is analogous to that of a lady doctor who can cook meals better than a servant, but who would rather engage a servant for cooking to spare time for the more lucrative job, i.e. medical practice. Now, three productive units in country *B* can produce 30*y*, but it would be better to produce 30*x* and exchange it for 40*y* in country *A*. Of course, the exchange ratio, after trade has started between the two countries, will lie between 3*x*: 4*y* and *x*: *y* but, as we have already seen, this does not make any difference to the validity of the argument. Thus we see that country *A* specialises in the production of *y* and imports *x*, and country *B* exports *x* and imports *y*.

In other words, a country may be importing a commodity in which it has lower absolute cost or may be exporting a commodity in which it has higher absolute cost. Difference in absolute costs is no determinant of inter-regional trade. The existence and direction of inter-regional trade is determined by comparative costs. A region produces that in which it has a greater comparative advantage or a less comparative disadvantage, i.e. in which it has less comparative costs.

Case III

	Country <i>A</i>	Country <i>B</i>
One productive unit produces	20 <i>x</i> or 20 <i>y</i>	10 <i>x</i> or 10 <i>y</i>
Exchange ratio before inter-regional trade	$x:y$	$x:y$

This case brings out the fact that difference in comparative costs is an essential condition for the existence of inter-regional trade. Exchange ratio in this case cannot be different from $x:y$ after the trade starts.

1 Her advantage over *B* in the production of *x* is 15/10 and in *y* it is 20/10.

2 Her disadvantage against *A* in the production of *x* is 10/15 but in the production of *y* the disadvantage is 10/20.

Country *A* has an absolute advantage over country *B* in the production of both *x* and *y*, but comparatively she is equally well placed in both. There is no comparative advantage in either. Similarly country *B* has an equal disadvantage in both. In other words, there are absolute differences of costs but no comparative difference.

In this case, there will be no trade between the two regions. For if country *A* produces $20x$ to exchange it for $20y$ in country *B*, or produces $20y$ to exchange it for $20x$, nothing is to be gained from either of these transactions. Similarly with country *B*. The conclusion, therefore, is that inter-regional trade will not exist if there is no comparative difference in costs and will exist if there is such a difference.

Our two truths are now evident. First, differences in comparative costs are the one and the only condition for the existence of inter-regional trade. Second, a region produces that in which it has a greater comparative advantage or a less comparative disadvantage.

MONEY PRICES AND INTER-REGIONAL TRADE

The problem. In the real world, when dealers in one region purchase a commodity from dealers in another region, it is because they find money price of the commodity lower in the other region than in their own region. When they, on the other hand, sell a commodity in the foreign region, it is because the price there is higher and in the home region it is lower. Thus those goods are exported of which money prices in the foreign regions are higher, and those goods are imported of which money prices are lower outside. If this is a fact, as it is, then why do we not explain inter-regional trade in simple monetary terms? Cannot we, for instance, say that inter-regionally goods move in the direction of higher money prices? If such a simple explanation could serve our purpose, we could be saved of the intricate comparative cost analysis.

Money costs and prices are trade determined, not trade determining. To answer this question, we have once again to recall our case III, in which one productive unit produces $20x$ or $20y$ in country *A* and $10x$ or $10y$ in country *B*. Let us keep all the assumptions intact but remove assumption number six. We thus introduce money into the picture but assume that the same currency is used in both the countries. Let us call this currency "rupee". We start with equal wages in both the countries, say Rs. 5 *per* productive unit. Obviously, both the goods will be produced half as cheap in country *A* as in country *B*. Consequently, both *x* and *y* will begin to be exported from country *A* to country *B*. The latter having nothing to export back will, naturally, pay for the goods in rupees. Quantity of money in country *B* will diminish while in country *A* it will increase. Wages and prices in country *A* will rise and in country *B* they will fall till money costs and money prices in both the countries become equal. At that stage wage rate in country *A* will be twice as high as in country *B*. Trade between the two countries will come to a stop and will not be revived, unless some new factor changes the situation.

Thus we find that levels of money costs and money prices in the two countries are themselves the result of inter-regional movements of trade. They are not the cause of these movements and hence cannot explain these movements. Inter-regional movements of goods are caused by comparative differences in real costs and not by absolute differences in money costs and prices.

Even if we drop the assumption of the same currency in the two countries, our conclusion will be no different. In case the two countries have different currencies but both are on the gold standard, working of the mechanism will be similar to the above. As country *A* exports both the commodities, country *B* will export back gold which will reduce wages and prices in the latter country and raise them in the former. Equality of costs and prices will thus be established and trade between them will stop. If, on the other hand, both countries are on inconvertible paper currency standards, then consequent upon initial trade, there will be movement in exchange rate between the two currencies. Exchange rate will settle down at a level at which trade is no more profitable to either of the countries.

Differences in money costs and money prices, therefore, offer no explanation for inter-regional trade. They are themselves to be explained by this trade. Theory of comparative costs offers the only satisfactory explanation. It is, however, important to note that when things have settled down, difference in money costs serves as an index of difference in comparative costs.

LIMITED INTER-REGIONAL SPECIALISATION

In discussing the theory of comparative costs, we adopted, as is usual, two-region-two-commodity analysis and made some other simplifying assumptions. Our conclusion was that a region produces and exports that thing in which it has a greater comparative advantage or a less comparative disadvantage; it imports that thing in which it has a greater comparative disadvantage or a less comparative advantage. In such simplified conditions, when trade takes place, one commodity is exported and the other is imported. In the real world we come across certain phenomena which cannot be explained by this simplified analysis.

1. *Case of domestic goods.* While trade is taking place between two regions, there are certain commodities which are neither exported nor imported.

This may be due to various reasons. Some commodities are geographically immobile, as for example houses. Trade in such commodities cannot take place. Also, may be, that one region has a comparative cost advantage in the production of a commodity but this advantage is not enough to cover costs of transportation to the other region, and thus it is not exported.

2. *Commodities produced as well as imported.* Sometimes it happens that a region is producing as well as importing a commodity. This may happen when in one of the regions the commodity in question is produced under conditions of increasing costs. This can easily be shown with the help of diagram 36.1. Country *A* can produce the commodity at constant costs and *MCA* is its marginal cost curve. Country *B* can produce it at increasing costs and *MCB* is its marginal cost curve. Let us assume that there are no costs of transport and that aggregate demand for the commodity is more than *OP*. As country *A* can produce any amount at a cost of *OR* per unit, price of the commodity will be *OR*.

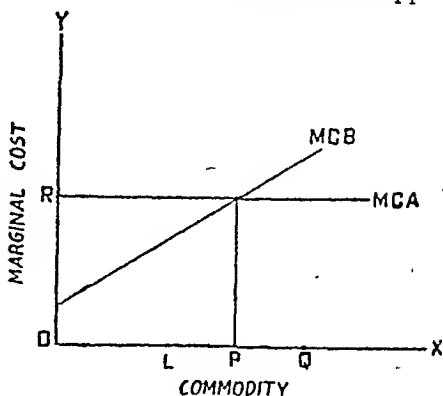


Fig. 36.1

Country *B* will produce *OP* units of the commodity. If her demand at price *OR* is more than *OP*, say *OQ*, she will import *PQ*. This is one case in which one country (*B*) will be producing as well as importing the commodity. If, on the other hand, *B*'s demand is less than *OP*, say *OL*, she will export the balance *LP* to country *A*. Now, if *A*'s demand at price *OR* is more than *LP*, she will produce the balance herself. This is another case in which one of the countries will be producing as well as importing the commodity.

There is another explanation also of this phenomenon. Suppose for the production of the commodity, some specific factor is required, which is available in a limited quantity in the region which has a comparative advantage in producing it. Let this region be country *A* and the other be country *B*. Suppose country *A* can produce *OP* (Fig. 36.2) which is not enough to meet the aggregate demand of both these regions.



Fig. 36.2

Now, if *A*'s demand is more than *OP*, say *OQ*, she will be importing the balance *PQ*. If her demand is less than *OP*, say *OL*, and *LP* is not enough to meet *B*'s demand, then *B* will produce the balance of her demand over imports. In either case one of the countries will be producing as well as importing the commodity.

3. *Commodities imported as well as exported.* A region may be importing as well as exporting a commodity. One possible explanation for this phenomenon is that the commodity imported is different

in quality from the commodity exported. India is an importer as well as an exporter of cotton but qualities of imports and exports are different. Goods of different quality are different commodities from the economic standpoint. Hence when quality of imports differs from that of exports, we cannot say that the same commodity is being imported as well as exported.

Differences in cost of transport may make it possible for one part of a region to export a commodity and another part to import it. Bombay mills have, for a long time, been importing coal from South Africa, while Raniganj and Jharia were exporting coal to Burma and Malaya. Cost of sea transport being much less than the cost of land transport, this transaction proved doubly beneficial to the country.

Another important explanation of this phenomenon is entrepot trade. Even countries like Afghanistan and Nepal, which have no direct opening to the sea, have to trade with distant countries. Thus when Nepal imports goods from England, they pass through India. In customs registers they are entered as imports at Calcutta, while at Raxaul they are again entered as exports. Similarly when Nepal exports goods to some distant country, customs registers at Raxaul show them as imports, while at Calcutta they are shown as exports. Compiled figures, therefore, show the same commodities as exports as well as imports. In fact they are neither our exports nor our imports.

EFFECT OF INTER-REGIONAL TRADE ON PRODUCTION

1. *The three cases considered.* Inter-regional trade is inter-regional specialisation. As every region specialises in the production of those things in which it has a comparative advantage, naturally larger production is one of its results. It is, however, instructive to show by illustrations that this trade does result in increased production. For that purpose we may take up the three cases already considered, assuming that there are two productive units in each country, in *A* as well as in *B*.

Case I

	Country <i>A</i>	Country <i>B</i>
	5x	10x
One productive unit	or	or
produces	15y	10y

Before specialisation, country *A* produces $5x+15y$, while country *B* produces $10x+10y$. Aggregate production will be $15x+25y$. When country *A* specialises in the production of *y* and country *B* in the production of *x*, the former will produce $30y$ and the latter $20x$. Thus aggregate production will be $20x+30y$, which is obviously greater than $15x+25y$.

Case II

	Country A	Country B
One productive unit produces	15x	10x
	or	or
	20y	10y

Before specialisation country A will be producing $15x+20y$ and country B $10x+10y$. Aggregate production will be $25x+30y$. After A has specialised in y and B in x, Country A will produce $40y$ and country B $20x$. Aggregate production will now be $20x+40y$, which means a reduction of $5x$ and an increase of $10y$. Limiting exchange ratios being $3x:4y$ and $x:y$, $5x$ is of less value than $10y$ by any ratio lying in between the two. Hence the new aggregate production of $20x+40y$ is of greater value than the pre-specialisation aggregate of $25x+30y$.

Case III

	Country A	Country B
One productive unit produces	20x	10x
	or	or
	20y	10y

Before specialisation, aggregate production in the two countries will be $30x+30y$. Now suppose country A specialises in the production of y and country B in that of x. Country A will produce $40y$, and country B will produce $20x$. Aggregate production will be $20x+40y$, which is greater by $10y$ and smaller by $10x$ than $30x+30y$. As exchange ratio is $x:y$, $10x$ and $10y$ are equal in value. Hence there is no gain from specialisation. Similarly if country A specialises in x and country B in y, output of the same value will be produced.

Thus inter-regional trade takes place when it is advantageous and results in increased production. When it yields no advantage, it does not take place. The gain from inter-regional trade is distributed between the participants according to the terms of trade which we shall discuss at the end of this chapter. But whether the gain is equally or unequally divided between the participants, both regions do stand to gain.

2. *Idle specific factors.* A country may be obliged, by the comparative cost situation, to import a commodity the production of which requires a specific factor which it possesses. For instance, a country may possess coal mines and yet may be importing coal. Foreign trade will thus throw these mines idle. The country will not be getting any coal from its own coal mines, but will be paying for coal imported from outside. Does it not obviously involve a loss?

In finding an answer to the query, let us assume that the factor under consideration (coal mine) is absolutely specific, i.e. it cannot be used for any other purpose, whatsoever. We shall consider two

interests separately, the interest of the owner of the mine and the interest of the country as a whole.

Mining of coal requires men and tools—labour and capital. Suppose a unit of labour and capital costs Rs. 100. This means that each unit of labour and capital would be earning Rs. 100 in all branches of the industry. For, if it could earn more elsewhere, it would quit mining, and if it were earning less elsewhere, more labour and capital would have shifted to mining.

Now, suppose that to mine one hundred maunds of coal, three units of labour and capital are needed. Cost of production of coal would be Rs. 3 *per* maund. The price, before foreign trade is allowed, will be anywhere above Rs. 3 *per* maund, depending on the extent of demand. If the price is Rs. 4 *per* maund, the owner of the mine will earn a surplus of Rs. 100, which is rent. As the factor is absolutely specific, its transfer earning is zero. In other words, if due to a decrease in demand the price falls to Rs. 3 *per* maund, the mine would still be worked although rent will have fallen to zero. If foreign trade starts now, owner of the mine would not find himself in any worse position. Nor would the owners of labour and capital, who would shift their factors to other uses. Thus neither the owner of the specific factor, nor of the non-specific factors, will be losers on account of foreign trade.

Would the country as a whole lose? The answer is, no. Three units of labour and capital were producing coal worth Rs. 300. Now these units will be producing some other commodity. This other commodity must be valued as much, otherwise how could their producers offer these units of labour and capital Rs. 100 *per* unit?

If the price of coal were Rs. 4 *per* maund when foreign coal begins to be imported, the conclusion would be no different. Suppose, as a result of foreign imports, the price falls to Rs. 3 *per* maund. Non-specific factors will produce other goods worth three hundred rupees which will purchase one hundred maunds of coal. The owner of the mine will lose rent but the consumers will get coal cheaper. What the left hand loses will be gained by the right hand.

The above analysis assumes that enough time is allowed to the non-specific factors to shift to other uses. The process of shifting may involve some friction. During that period there will undoubtedly be some loss of earning to these factors.

Conclusion. Our conclusion is that inter-regional trade increases aggregate production. Benefit to either region is twofold. The value of imported goods is low as compared with their values when they were produced at home. Imports are thus obtained at cheaper rates, i.e. at less sacrifice. Also inter-regional trade permits productive resources of the country to be employed in the production of those commodities for which they are specially fitted. Thus by inter-regional trade a greater amount of utility is obtained by a given effort.

This increase in utility arises because quantities of all goods available increase, or because the new assortment available is preferred to the old assortment.

EFFECT OF INTER-REGIONAL TRADE ON DISTRIBUTION

1. *Classical analysis.* How does inter-regional trade affect the various interests in the country? It was customary with the classical economists to think of the community as constituted of wage-earners, rentiers and capitalists. Also, foreign trade was conceived of as trade between agricultural countries on the one hand, and manufacturing countries on the other. Effect of foreign trade on functional distribution of national income, then, implied how wages, rents and profits change absolutely as well as relatively to one another.

We have shown that there is always an increase in aggregate production by the opening of inter-regional trade. If this gain accrues to the community at large, all sections may gain. If, however, the gain is appropriated by one class, others may gain nothing; they may even suffer.

(a) *Rents.* As an agricultural country exports produce of its land to pay for manufactured goods, its margin of cultivation extends and rents rise. In modern language, land becomes more scarce in comparison to its demand and rents rise. Export of raw materials will increase the incomes of owners of mines and forests also. In the industrial country, on the other hand, margin of cultivation moves up and land becomes less scarce with respect to demand for it. Rents in that country fall. And so do incomes from ownership of mines and forests.

(b) *Wages.* In the agricultural country, exports of agricultural goods will make food dear. Labourers are adversely affected by a rise in food prices. They are, however, compensated to some extent by cheapness of the imported goods. As, in general, food claims a large proportion of the income of labourers, the labourers may on the whole be sufferers as a result of foreign trade. But they will share the prosperity arising from better employment of resources. Also, if property is widely distributed, most of the workers will be landowners as well. What they lose in wages, may be more than made up in rents. In the manufacturing country, on the other hand, foodstuffs become cheaper and thus real wages rise.

(c) *Profits.* Foreign trade implies specialisation in both the countries, and hence more production and more purchasing power. Markets thus get extended. Specialisation reduces costs and extended markets bring higher prices. Profits increase in the agricultural as well as the industrial country.

Defects of this analysis. Classical method of studying the effects of foreign trade on the internal distribution of wealth is defective. It does not give any place to people with fixed incomes and fixed obligations.

A more important defect of this method is the assumption that imports of some countries are wholly primary goods and exports are wholly manufactured goods. For instance, in the case of India 57 per cent of exports are manufactures and 43 per cent are primary goods. Similarly 40 per cent of her imports are manufactures and the rest are primary goods. Obviously, an analysis of her exports and imports does not help us to conclude whether she is an agricultural or an industrial country.

(2) *Haberler's analysis.* An alternative method of studying the effects of foreign trade on internal distribution of income has been given by Haberler. He analyses the effect of foreign trade on the relative prices of specific and non-specific factors of production.

(a) *Specific factors.* Take the specific factors first. Such of them as are required for "export industries" will, as a result of foreign trade, find their demand having gone up and their relative scarcity having increased. Their prices will, therefore, rise. Similarly the demand for specific factors, required for producing those things which begin to be imported, will decrease and their prices will fall. Obviously, the owners of factors, specific to the "import industries", will experience a fall in their incomes.

(b) *Non-specific factors.* Non-specific factors are, by definition, those factors which can move from one industry to another. Non-specific factors, which were employed to produce goods which are now being imported, will now shift to those industries which are producing exports. According to the principle of comparative costs, these factors will prove more productive in their new employments, therefore their prices will rise. But rise in the incomes of owners of non-specific factors will, obviously, not be as much as those of the owners of factors specific to production of export goods.

EFFECT OF INTER-REGIONAL TRADE ON EMPLOYMENT

Peculiarities of labour. It is of special interest to discuss the effects of foreign trade on employment. It may be noted to start with that labour differs from other factors of production in two respects. First, even a small fall in wages may lead to strikes and unemployment. Secondly, if a material means of production, say a machine, has become obsolete, it may be left idle to wear out. But a labourer must try to maintain himself even if he is too old to learn a new job.

Is labour a specific factor? Individual unskilled workers are very mobile from one industry to another, provided movement does not involve long distances. Individual skilled workers, whose jobs require long training or long courses of education, are more or less specific. It is rather difficult for a physician or an engineer to change his profession. Considering labour as a class, this factor is non-specific in the long run. If the demand for teachers is falling and that for lawyers is increasing, more graduates will join law colleges and less training colleges. Existence of trade unions tends to make labour less mobile in the short run. So

does the loss of time involved in finding a new job. We may conclude that from the long period point of view labour is a non-specific factor, but in the short period many individuals and groups of workers find it difficult to shift from one occupation to another.

Long-run effect. Before foreign trade begins, a region produces "exports" as well as "imports". After trade starts, it will produce only "exports." It will produce these for the domestic market as well as the foreign market and, therefore, the demand for labour in export industries will increase. Those, who are thrown out of jobs in import industries, will be absorbed in export industries. As aggregate production increases, labourers may be offered more jobs or higher wages. Thus in the long run, foreign trade cannot affect labourers adversely. In due course of time labour force will adjust itself to changed circumstances. Labourers, as owners of a non-specific factor, will enjoy an increase in their incomes.

Short-run effect. In the short run, however, foreign trade may adversely affect those who are employed in "import industries". Some of them will not like to change over even if they get lower wages in their "old" jobs. Others cannot shift to a new industry unless they are prepared to undergo a long training or accept a wage much lower than their previous training had entitled them to. Even those, who are more or less unskilled and may feel at home at their new jobs, may have to wait for some time before they get themselves fixed up.

INTER-REGIONAL TRADE AND UNDERDEVELOPED REGIONS

The classical view. Classical economists studied the effects of inter-regional trade—or, better still, international trade—on production, employment, and distribution. Their positive conclusion was that inter-regional trade increases production and employment, and all participants benefit therefrom. Of course, how much a region benefits from its trade with another region, depends on the terms of trade, i.e. the terms of exchange of goods. The fact remains, nevertheless, that all the regions gain from mutual trade transactions.

Each region gets those things which it cannot produce. It also gets those things for the production of which it is comparatively less fitted. And it gets those goods in exchange for less effort. Also it can concentrate on the production of those goods for which it is more favourably placed. Thus every region can progress fast. If any region is not well equipped for producing any kind of goods, this does not prove a handicap in the way of its economic advancement.

When any region introduces improved methods of production, its costs of production fall and, therefore, other regions can purchase cheaper from it. Moreover, as the progress of the region under consideration increases incomes and purchasing power of its inhabitants, other regions can sell to it more as well as dearer. Market for their products extends which opens up new possibilities of

development and progress. Thus every country shares in the prosperity of others, and all of them march together on the road to progress.

Neo-classical view. Recently two economists—Eli Hecksher and Bertil Ohlin—have reiterated the classical belief that inter-regional trade is a process by which prosperity and advancement of one region is shared by other regions.

They have re-stated the theory of comparative costs. According to them, the most significant factor in the situation is that different countries are differently endowed in respect of different factors of production. For instance, comparatively speaking land is abundant and labour is scarce in Australia: On the other hand, in Japan land is comparatively scarce and labour is abundant. These differences in relative scarcities—or relative abundance—lead to differences in factor prices. In our example, land must be cheaper and labour dearer in Australia than in Japan. This gives rise to differences in costs of production of different commodities. Australia is in a more favourable position to produce those goods for which more land and less labour are used. Similarly Japan can produce those goods cheaper, in the production of which the ratio of labour to land is high. It is this difference in costs which provides the basis for inter-regional trade.³ Australia will produce and export those commodities of which the methods of production are “land-intensive”, while Japan will produce and export those things of which the methods of production are “labour-intensive”.

If factors of production could move from one region to another with perfect ease, some labour would move from Japan to Australia till the relative scarcity of the two factors—and, hence, their rates of earnings—became equal in the two regions. This cannot happen on account of inter-regional immobility of factors. But trade between the two regions provides a substitute method for achieving the same end. Japan concentrates on the production of those goods which require more labour, while Australia produces those goods which require less labour. This specialisation so adjusts demand for labour to its supply in the two regions that wage rates become equal in the two regions. For precisely the same reason, earning of land becomes equal in Japan and Australia.

Scarcity is, after all, the measure of supply *in relation to demand*. By assigning different tasks to the two regions, trade between them creates unequal demands for the two factors in these regions. It reduces the scarcity of the factor which is relatively scarce, and increases the scarcity of the factor which is relatively abundant. And it continues to expand till equality in the relative scarcities of the two factors is achieved.

³ This is a restatement of the comparative cost principle. Assuming that same techniques are available to the two regions, equal relative scarcities of factors will result in equal comparative costs. There will, then, be no trade between them. It is only unequal relative scarcities of factors, coupled with the fact that for different commodities factors are combined in different proportions, which give rise to differences in comparative costs and, hence, to inter-regional trade. Nevertheless, this way of stating the theory brings out the underlying assumptions of the comparative cost principle.

Equality in relative scarcities leads to equality in their rates of earnings in the two regions.⁴

The above analysis may give the impression that, as a result of decline in the scarcity of labour, wages will fall in Australia, or that rents will fall in Japan. This is not the case. As a result of trade, the national income of both the regions will increase. In each region the total value of land and labour will, therefore, rise. Both the factors will share prosperity. Only in Australia rise in rents will be greater than that in wages, and in Japan rise in wages will be greater than that in rents. Thus the level of factor prices rises in both the regions but there is a difference in relative rises.

Japan and Australia both gain from trade, but who gains more depends on the terms of trade. Similarly, land and labour both gain from trade but which gains more depends on the relative scarcities of them before the trade starts.

The conclusion is that all participants gain from inter-regional trade. Productive activity in different regions adapts itself to their peculiar factor endowments. The impact of differences in scarcities of factors is reduced. Rates of earnings of different factors tend to be equal in different regions. Any improvement in the methods of production in one region raises the earnings of factors in that region. Its trade with the outside world carries the benefit to other regions also. Trade helps in the spread of technical knowledge. Quality of technical labour tends to become uniform. Thus all countries progress together. Prosperity of one brings prosperity to others. And the agency which helps to achieve this is inter-regional trade.

Myrdal's approach. Professor Gunnar Myrdal has pointed out that inter-regional trade, instead of reducing inter-regional inequalities of incomes, tends rather to increase them. His argument may be summarised in the following steps:

1. The notion of stable equilibrium is unsuitable for the study of changes in social system. Underlying this notion is the assumption that every change calls forth another counteracting change, so that the original change shifts the situation away from the position of equilibrium and the induced change brings it back to that position. Social system is not a self-stabilising thing of that description. Normally, a change calls forth not a counteracting change but reinforcing changes which further push the situation in the same direction, rather than shifting it back to the original state.

The relevant notion for studying changes in social system is that of circular causation, because social changes have a tendency to become cumulative. Progress leads to further progress and poverty

4 It must be noted here that complete equality will probably never be achieved because of costs of transportation and also because of the fact that many goods are jointly demanded. Differences are reduced, but they never disappear. Nevertheless, the essential of the argument, that trade reduces scarcities of factors, is basically sound.

leads to further poverty—this is the correct description of the behaviour of social changes. Tendency to cumulative progress or cumulative decline can be stopped or reversed only by exogenous changes. If a factor starts progress, the process goes on gaining momentum until it is intercepted by some force or factor from outside. Similarly if some factor starts a decline in prosperity, the process becomes progressively cumulative till it is intercepted by an exogenous force like a new invention, or availability of a new market, or government interference.

2. When a region has taken to the path of economic advancement, it comes to offer favourable conditions for employment of labour and capital. The youthful and vigorous workers of the underdeveloped regions shift to this region because it offers better prospects of higher earnings. Large amounts of capital also migrate along with them because of the promise of higher profit. Thus once economic development starts in a region, it tends to develop fast and attracts from other regions their vigorous workers and capital. These effects on the other regions are called *backwash effects*, because they adversely influence the economies of these regions. We may define *backwash effects* of the advancement of a region as the release of forces which bring about a decline in the neighbouring regions as well as in those regions which trade with it. The advancement of an area tends to become cumulative. And its advancement produces, by virtue of its backwash effects, a progressive decline in the other regions.

3. As is clear from the above definition of backwash effects, trade between an advanced region and an underdeveloped region proves contributory to these effects. It is as a result of such a trade that the less developed industries of underdeveloped areas are crushed by competition from the cheaper products of the developed region. And those industries, which would otherwise have come into existence in due course, cannot take birth because of the same factor. The adverse effect on our small-scale and cottage industries, which the British trade with our country produced, and the clog which it created in the wheel of our economic progress, is a good instance in point.

Trade between a developed region and an underdeveloped region tends progressively to expand markets for the industrial products of the former, and to contract markets for the industrial products of the latter. Industries of the developed area progress faster and faster and industries of the under-developed region suffer an ever-increasing decline. Whatever industries the underdeveloped region has, they tend to disappear, and everyday the region comes to rely more and more on agriculture.

This process of rapid advancement in one region and progressive decline in the other is supported by other factors. The underdeveloped region cannot afford to effect improvements in its transport system and other public utilities. It cannot provide sufficient facilities for education—technical, commercial, and general. And there is little reason to throw away all those social customs and inhibitions which hamper the march towards progress.

The effect of all these factors is that agriculture and whatever remains of manufacturing industry continue to be run inefficiently. As the advanced region goes on raising its efficiency in all lines of production, the underdeveloped region comes to be more and more handicapped in competition. Consequently, not only does it come to have negligible or no manufactures, its productivity even in agriculture stands low and sinks lower and lower.

4. Trade between an advanced region and an underdeveloped region produces the opposite kind of effects also. They are called *spread effects*. We may define *spread effects* of the advancement of a region as the release of forces which bring about advancement of the neighbouring regions as well as of those regions which trade with it.

The advancing region provides an expanding market for the agricultural products and other raw materials of the underdeveloped region which trades with it. If sufficient people get employment as a result of it, the process of progress may start and proceed in a cumulative manner in the underdeveloped region. This tendency is further reinforced by the fact that the advanced region provides a source of advanced knowledge and improved methods.

5. Unfortunately the *spread effects* are generally weaker than the *backwash effects*. Not only that. It has been found that disparities in incomes in poor countries are greater than in rich countries. Also, these disparities are increasing in poor countries and decreasing in rich countries. Conclusion drawn from these two facts is that the strength of *spread effects* in a region depends on the level of its economic development. They are very strong in a rich country because the existence of facilities of transport, communications, education, etc. enables every beneficial factor to bestow its maximum advantage. In an underdeveloped area, the *spread effects* are weak on account of the absence of these facilities.

6. The conclusion is that inter-regional trade does not reduce inequalities between regions; on the other hand it increases them. An advanced region benefits from such a trade while, generally, an underdeveloped region suffers a stagnation or a decline as a result of it. This is the explanation why underdeveloped countries have continued to remain in a stagnant state after centuries-old trade relations with advanced countries. They have continued to remain in this state because of such trade relations, and not in spite of them. Classical theory of international trade could not explain their underdevelopment because of its failure to take account of the *backwash effects*. It took note of the *spread effects* only.

MEASUREMENT OF TERMS OF TRADE

Meaning. If trade between two regions involves two commodities only, one on either side, we can speak of an exchange ratio or an exchange rate between the two. When, however, more than two commodities are involved, we speak of terms of trade. Terms of

trade mean the rate at which imports are purchased for exports; When for given imports more goods have to be exported, or for given exports less goods can be imported, terms of trade are said to have become unfavourable and *vice versa*.

Two points deserve notice. First, when in trade between two regions, say country *A* and country *B*, terms of trade become favourable for country *A*, it obviously implies that terms of trade have become unfavourable for country *B* and *vice versa*. Second, terms of trade as such cannot be measured. A list of various amounts of a number of commodities exported and a corresponding list of the amounts of commodities imported can convey little sense. Hence all that can be done is to measure *changes* in the terms of trade. That is, it is possible to make only a comparative study of terms of trade.

Measurement of changes in terms of trade. For measuring changes in terms of trade, aid is taken of index numbers of prices. A year is selected as a base year and the weighted averages of prices of exports as well as of imports during that year are represented by 100 each. Corresponding figures for prices of exports as well as of imports during the year (or years) in question are computed. Index number of exports divided by the index number of imports for the year in question indicates how terms of trade have moved in comparison with the base year. Consider, for instance, the following table:—

TABLE XXXVIa

Year	Index for export prices	Index for import prices	Index for terms of trade
1939	100	100	100
1940	110	100	$\frac{110}{100} \times 100 = 110$
1941	120	150	$\frac{120}{150} \times 100 = 80$

In 1940, as compared with 1939 which is treated as the base year, prices of exports rose by ten *per cent* while prices of imports stood at the same level. Terms of trade thus moved in favour of the region by ten *per cent*. In 1941, as compared with the base year, while export prices rose by twenty *per cent*, import prices rose much more, *i.e.* by fifty *per cent*. Terms of trade, therefore, moved against the region by twenty *per cent*.⁵

5 Many writers treat the ratio of import index to export index as the index of terms of trade. If this is done, then a rise in the index means that terms of trade have become unfavourable, and *vice versa*.

Division of gain resulting from trade between two regions depends on terms of trade. Better terms of trade, other things being equal, imply more gain from trade to the region in whose favour terms of trade have moved.

Interpretation of changes in terms of trade. Changes in the terms of trade have to be interpreted with caution. Measurement of changes in the terms of trade involves use of index numbers. And index numbers are open to all those objections which can be levelled against an average. Moreover, to correctly interpret a change in the terms of trade, it is always advisable to peep behind the scene and find out what has brought about the change. Suppose terms of trade have moved against a region. It may be that it has begun to offer its exports cheaper because of improvements in the methods of production at home. In such a case unfavourable terms of trade may not involve a loss. On the other hand, if terms of trade have become unfavourable on account of an increase in costs abroad, higher prices paid for imports represent a real loss.

Thus, while gain to a region from its foreign trade does depend on terms of trade, movements in the terms of trade are not a sure index of this gain. Still, if goods are being produced at constant costs at home and abroad, terms of trade unmistakably indicate the division of gain between the trading regions. The nearer the terms of trade to the pre-trade ratio at home, the less is the share of the region in the benefit from trade and *vice versa*.⁶

DETERMINATION OF TERMS OF TRADE

The limits. In tracing the factors which determine terms of trade between two regions, it is convenient to follow the analysis given by J.S. Mill. Here we have once again to assume all those conditions which we did in studying the theory of comparative costs—two countries, two commodities, barter system of exchange, constant costs of production, etc. etc. Suppose, now, that cost position in the two countries is as follows:—

	Country A	Country B
One productive unit produces	10x or 15y	10x or 10y
Exchange ratio before trade	$x:1.5y$	$x:y$

Country A will produce y and country B will produce x . If terms of trade are such that country B gets less than one y for one unit of x , trade with country A will be disadvantageous for her. Thus terms of

⁶ This must be already clear to the reader from his study of the comparative cost principle. It will become clearer in the discussion of determinations of terms of trade which follows.

trade cannot be such that one unit of x exchange for less than one unit of y . Similarly by giving more than 1.5 units of y for one unit of x , country A will be a loser. Thus terms of trade cannot be such that a unit of x exchanges for more than 1.5 units of y . Hence if there is to be any trade between the two countries, terms of trade must lie between $x:y$ and $x:1.5y$.

Reciprocal demands. Where exactly, between these two limits, will the terms of trade stand? The answer is that it depends on reciprocal demands. The terms of trade must be such as bring about an equation in the reciprocal demands. This requires further explanation.

Suppose the terms of trade are $x:1.2y$, and at this rate country A demands 1000 units of x . It obviously implies that at these terms of trade, country A is prepared to supply 1200 units of y . Thus, when we speak of A 's demand for x at given terms of trade, the amount of y which it is prepared to offer for sale is implicit in the statement. Similarly when we know B 's demand for y at given terms of trade, we also know implicitly how much of x she is prepared to supply at this rate. We need, therefore, to know only each country's demand for the other's product at any terms of trade, i.e. reciprocal demand. Terms of trade will bring about equilibrium between these reciprocal demands.

Equation of reciprocal demands. A country's demand for the other's product is subject to the law of demand. More favourable the terms of trade to a country, more will be her imports and *vice versa*. Keeping this fact in mind, let us draw the respective demand and supply schedules of the two countries.

TABLE XXXVIb

Terms of Trade	Country A		Country B	
	Amount of x demanded	Corresponding amount of y offered	Amount of y demanded	Corresponding amount of x offered
1	2	3	4	5
$x:y$	1550	1550	..	800
$x:1.1y$	1300	1430	990	900
$x:1.2y$	1000	1200	1200	1000
$x:1.3y$	800	1040	1430	1100
$x:1.4y$	700	980	1680	1200
$x:1.5y$	640	..	1950	1300

As we move down the columns in the above table, x becomes dearer and y becomes cheaper. Hence at each successive terms of trade, amount of x demanded by country A (column 2) will contract and the amount of y demanded by country B (column 4) will extend. Given the terms of trade and A 's demand for x , her supply of y can

be calculated. Entries in column 3 can be calculated from columns 1 and 2. Similarly entries in column 5 can be calculated from columns 1 and 4.

With the schedules in the above table as given data, equilibrium will be established at the terms of trade $x:1.2y$. It is at this rate that "equation of reciprocal demands" is established.

Elasticities and intensities of demand. If we scan the above table carefully, we find that relative bargaining strength of either country, on which terms of trade depend, is dependent on the nature of their respective demands. Suppose country A 's demand for x is inelastic. Then she will purchase a given quantity of x whether terms of trade become more favourable or less favourable. In other words, she is in a weaker bargaining position.⁷ Conversely, higher the elasticity of demand for her imports, stronger is her bargaining position.

Bargaining strength depends on the intensity of demand also. If country A 's demand increases (so that amount demanded at any given rate is higher than before), she will become a weaker bargainer and terms of trade will move against her. Evidently, then, a big country is in a weaker bargaining position as against a small country.

Conclusions. 1. Terms of trade always lie between the limits determined by the ratios of costs of commodities in the two regions.

2. Terms of trade depend on relative intensities and elasticities of the respective demands of the two regions. Less intensive or more elastic the demand for imports of a region, the more favourable will be the terms of trade to it. Similarly if demand for its exports is large and inelastic, terms of trade will be favourable to it.

3. Equilibrium is established at the terms of trade which bring about an equation in the reciprocal demands.

Further Readings :

1. J.S. Mill : *Principles of Political Economy*, Bk. III Chs. 17 and 18.
2. Haberler : *International Trade*, Chs. X and XI.
3. A.E.A. : *Readings in the Theory of International Trade*, pp. 272-300 (Article by Eli Heckscher).
4. Ohlin : *Interregional and International Trade*, Chs. 1, 2 and 7, and Appendix III.
5. Myrdal : *Economic Theory and Underdeveloped Regions*, Chs. 2, 3, 5 and 11.

⁷ It is assumed in this argument that the two countries are approximately of equal size.

CHAPTER XXXVII

PROBLEMS OF INTERNATIONAL TRADE

BALANCE OF PAYMENTS

Balance of trade. People, interested in the commerce of their country with the outside world, generally like to know what commodities are imported from foreign countries and what products of the country are exported abroad. They desire to know the quantities as well as values of exports and imports. If a statement is prepared giving on the one hand a list of quantities and values of the various goods exported, and a list of quantities and values of the goods imported on the other, we get what is called the balance of trade. If we use the term "costs of transport" to cover carriage, insurance, banking charges, and export duties, we can say that, while values of imports include the costs of transport to our ports, the values of exports do not include the costs of transport to the foreign ports. This is what is meant by saying that in a balance of trade exports are accounted for F.O.B. (free on board), while imports are entered c.i.f. (costs, insurance, freight). There are thus two columns in a balance of trade, one showing exports F.O.B., and the other showing imports c.i.f.

Obviously, a balance of trade must relate to a period of time. This period is generally a year, though statements may also be prepared on a quarterly or a monthly basis. If the aggregate value of exports equals the aggregate value of imports during a year, balance of the trade is said to be even. If, however, the value of exports exceeds the value of imports, balance of trade is said to be active, positive or favourable. And if the aggregate value of imports exceeds that of exports, it is said to be passive, negative, or unfavourable. The use of the terms favourable and unfavourable balance of trade has sometimes led to the confusion whether the term "balance of trade" refers to the whole statement of export values and import values, or to the excess of the one over the other. Probably it would be advisable to use the term balance of trade to mean the whole detailed statement and to use the phrases favourable or unfavourable balance of trade to denote the difference between aggregates of values in the two columns.

Balance on income account. A country does not export and import goods only. Services of various kinds like transportation, banking and insurance also constitute items in international exchange. Then there are items like interest and profit on foreign investments which are payments for the services of these investments. As these items are not recorded in customs registers kept at the port towns, they have come to be known as "invisible" items of trade. If, in addition to "visible" items of exports and imports, "invisible" items of trade are included, the statement thus obtained is the balance on current account or income account.

Balance of payments. Neither the balance of trade nor the balance on income account tells the whole story. Payments become due from one country to another, not only on account of the so-called "visible" and "invisible" items of trade, but also on account of capital movements, i.e. borrowing and lending. If we include, on the one hand, all those items because of which payments become due from the foreigners to the residents and, on the other, those because of which payments become due from the residents to the foreigners, we get a statement which is called the balance of payments. It may be noted that by the term "residents" we do not mean "citizens." Citizens of a country may go and stay abroad. Whatever, then, they purchase from the residents of their home country, occasions a payment to those residents. Thus, whatever they purchase constitute import items for the country where they are now residing.

An item, on account of which payment becomes due from foreigners to residents, is a credit item. Similarly an item which occasions payment to foreigners from residents is a debit item. For the sake of convenience, the various items involved may be classified into merchandise, invisible items of trade, tourists' expenditure, capital transactions and unilateral transfers. A word may be said about each one of these.

1. *Merchandise.* Export of merchandise is a credit item while their import is a debit item. The question, whether gold should be included under this head or not, has often been debated. It is said that for those countries which possess extensive gold mines, yellow metal is as much an item of trade as any other. For others, export of gold is a balancing factor. But gold may be exported just to earn profit from higher prices abroad. Similarly gold may be imported for industrial purposes rather than to balance credit with debit items. As it is often not possible in practice to distinguish between exports and imports of gold for various purposes, the difficulty is insurmountable. This explains variations in practice in this respect in different parts of the globe.

2. *Invisible items.* Invisible items of trade include carriage of goods by ships or otherwise, banking services like remitting relevant papers, and advancement and collection of money, insurance, services of agents of foreign concerns, of attorneys, etc. etc. Such services rendered by residents to foreigners constitute credit items and those rendered by foreigners to residents are debit items. Firms working in a foreign country remit profits to their shareholders. Similarly workers and salaried employees from foreign countries may remit part of their earnings to their families. Such transfers of money may be considered payments for services rendered. It must be evident that amounts relating to invisible items are difficult to ascertain as these cannot be recorded at the customs ports.

3. *Tourists' expenditure.* Tourists' expenditure in foreign countries means the sums spent on foreign goods and services. The only difference in this case is that instead of goods and services moving to the consu-

mers, it is the foreign consumers who move to goods and services. Sums of money remitted to students abroad may also be included in this item.

4. *Capital transactions.* If India extends a loan to Nepal, *immediately* a payment becomes due from India to the latter. An item, which necessitates a payment from residents to foreigners, is a debit item. Thus, while export of merchandise is a credit item, export of capital is a debit item. It has been suggested that in the interest of uniformity, exports of capital ought to be described as imports of foreign securities, and imports of capital as exports of securities. Then, as in the case of merchandise, export of securities will be a credit item and import a debit item.

Repayment of the loan by Nepal will constitute a credit item for India, and a debit item for Nepal. Interest payments cannot be included in capital movements because there is no repayment in lieu of payments of interest. These have to be included, along with profits and wages, in invisible items. For interest remitted abroad is nothing but a price paid for the services of foreign capital.

5. *Unilateral transfers.* Lastly, there are unilateral transfers. Such items give rise to movement of goods and services in one direction only. Instances of unilateral transfers are gifts, charities, war reparations and indemnities.

FAVOURABLE AND UNFAVOURABLE BALANCE OF PAYMENTS

Difficulties in discerning favourableness or unfavourableness. While defining the term balance of trade, we pointed out what is meant by favourable and unfavourable balance of trade. Can we apply the same epithets to balance of payments? The answer is: yes. But the meaning of the terms favourable and unfavourable balance of payments is not so obvious as in the case of balance of trade.

In fact, as ledger-keeping method is to be applied in preparing the balance-sheet, called the balance of payments, credit and debit items in such an account must balance. To show this let us start with a position where, in the balance of payments of a country during a year, debit items exceed credit items. There are three ways in which the country in question may meet the deficit. First, it may export gold. But export of gold is a credit item, which when inserted in the account will equalise the two columns of the balance of payments. A second method is to reduce balances abroad which the country might have accumulated in the past. This implies a repayment of loan to the country which again is a credit item. Thirdly, the country might borrow to the extent of the deficit. And import of capital is also a credit item. Even if the country concerned does not take any one of these steps, the position is no different because what it does not pay, it owes. What it owes is a short-term foreign loan which must be included on the credit side. Thus we find that if the balance of payments is properly and correctly prepared, the totals of credit items and of debit items must

invariably be equal. This is what is meant by saying that a balance of payments is always a balanced statement of the annual accounts of foreign credits and debits of a country.

Favourableness or unfavourableness of the balance of payments cannot, thus, be known just by casting a glance at the statement of accounts. One has to dig deeper to find out if the country has exported or imported gold, or whether it has increased or reduced its debt obligations to foreign countries. If it has to export gold or reduce balances abroad or raise loans from outside to balance the credit column with the debit column, the balance of payments is unfavourable. In the opposite circumstances it is favourable. It must be noted, however, that in actual practice it is difficult to say whether gold has been exported to benefit from a price-difference or to balance the balance of payments. On the other hand, it is not easy to say whether gold has been imported for industrial purposes or to bring import values to the level of export values. Similarly about funds imported or exported. In practice, therefore, there are very real difficulties in finding out whether the balance of payments is active or passive.

Balance of payments and prosperity. An active balance of payments is no index of prosperity, nor is a passive balance always to be unwelcome. Many poor countries have an active balance of payments. Similarly balance of payments may have become passive because the country is importing capital goods for her development. Moreover, imports are the payments which a country gets for her exports. If a country's balance of payments has been active over some years, it is but proper that it is passive for other years. A government, which adopts policies to earn an active balance of payments every year, denies her people the enjoyment of some goods and services which could be given them without any adverse effect on economy.

UNDESIRABILITY OF A CHRONIC IMBALANCE

Disadvantages of a continuously active balance of payments. A continuously active balance of payments is generally not considered a cause for any alarm. There has been only the single instance of Sweden where favourableness of the balance of payments was considered against the interest of the economy. It was argued that active balance leads to import of gold, which implies locking up country's resources in an investment which does not yield any income. Moreover, an active balance may produce inflation at home. If gold is imported and the country is on the gold standard, it causes a rise in prices. If balances are built abroad, currency has to be issued at home to make payments to those who have exported. If the active balance is a continuous feature, inflation might very well get out of hands. In the light of these views, it is contended that a continuously active balance of payments needs to be corrected.

Disadvantages of a continuously passive balance of payments. Adversity in the balance of payments can be met by reducing balances abroad or by borrowing from outside. Now, obviously, neither has any country un-

limited balances nor unlimited credit in the foreign countries. The third method is that of exporting gold. But stocks of gold also are not unlimited in any country. Thus continuing adversity in the balance of payments has to be corrected. It has to be corrected much before the stock of gold in the country has been exhausted or has become very slender. Gold is, after all, a medium of international payments. Also, in some countries it is a source of confidence in the domestic currency. Hence some stocks of gold must be conserved.

CORRECTION OF IMBALANCE

It is not in the best interest of a country that its balance of payments is continuously active or passive. In other words, an imbalance in the balance of payments, when it threatens to become chronic, must be corrected. There are many methods of correcting an imbalance in the balance of payments. We study them below with special reference to an adverse balance of payments. This we do for two reasons. First, an adverse balance of payments is more alarming a phenomenon than a favourable balance. Secondly, methods suitable for correcting an active balance are just the opposite of methods by which a passive balance of payments can be corrected.

Methods of correcting adverse balance of payments may be classified into monetary methods and non-monetary methods. In the former we include reducing the external value of domestic currency, and raising the internal value of it. Non-monetary methods refer to various devices which restrict imports as well as those which encourage exports. Restriction of imports, however, plays a more significant role.

1. MONETARY METHODS:

(a) *Reduction in the exchange rate.* Suppose there are free exchanges, that is the exchange value of home currency is left free to be determined by forces operating in the market. In case the balance of payments is adverse, demand for domestic currency will be less than its supply. More people will come to exchange banks to purchase foreign exchange than the people offering foreign exchange. Banks, therefore, begin to quote foreign currency dear. In other words, exchange value of domestic currency in terms of foreign currencies falls. This is called depreciation. Depreciation may be defined as a fall in the external value of domestic currency brought about by the working of the forces of supply and demand in the market. Depreciation means that domestic currency has become cheaper for the foreigners. Prices in the domestic market remaining the same, domestic goods become cheaper for the foreigners. This encourages exports. Also, a fall in the external value of domestic currency is synonymous with a rise in the value of foreign currency. Foreign price level remaining the same, foreign goods become dear for the residents. This discourages imports. Encouragement of exports and discouragement of imports together correct the adversity in the balance of payments.

Now suppose that the government or the Central Bank or any other authority has taken upon itself the obligation of keeping exchange rate fixed. Here the prototype of depreciation is devaluation. The latter means a deliberate reduction in the exchange rate by the monetary authority. In case the country is on the gold standard and so are other countries, devaluation can be effected by clipping the domestic currency so that its gold contents are reduced. In other cases, devaluation is brought about by raising the official rate at which foreign currency is bought and sold by the monetary authority. The effect of devaluation on the balance of payments is the same as that of depreciation, since both are reductions in the exchange rate. Exports are encouraged and imports discouraged, and the gap between credit and debit columns in the balance of payments may be bridged.

(b) *Deflation*. Just as a fall in the external value of domestic currency tends to correct an adverse balance of payments, so does a rise in the internal value of currency. Internal value of currency is raised by bringing down the general level of prices by contracting exchange media in circulation. We have already studied the methods of credit control by the Central Bank. One or more of those methods may be employed to deflate currency. As the prices fall at home, foreigners purchase more of our goods and residents of the country also shift their purchases to domestic products. Exports increase and imports fall, both adjusting themselves to each other.

2. NON-MONETARY METHODS

(a) *Import prohibition*. Import of certain goods which are considered non-essential or less important may be prohibited as a step towards correcting the balance of payments. If imports of certain manufactures are prohibited, exports of their raw materials may also be prohibited to bring down their prices at home.

(b) *Export bounties and drawbacks*. Exports may be encouraged by granting bounties on the quantities exported of those goods which would otherwise not be exported. In the case of goods which are already being exported, bounties may be granted on additional exports. In the case of those goods whose raw materials are imported from other countries, drawback is the relevant method. It consists in refunding import duty paid on that part of the raw materials which are used in producing the quantities exported. Evidently, drawbacks and bounties are the methods to make those exports profitable to dealers which would otherwise not be so.

(c) *Import Duties*. Import duties is a method of restricting imports. Such duties may be levied as *per unit* of the commodity or as a percentage of price. Duties which are fixed as a given sum *per unit*, are called specific duties. The unit may be defined in terms of weight, length, volume, or some other specific description. Duties, which are levied as a fixed percentage of the price of the commodity, are called *ad valorem* duties.

When an import duty is levied, buyers pay a higher price while sellers receive a lower price, the difference being the duty which goes to the government. Thus demand at home, as well as supply from abroad, contracts. It is, therefore, held that import duties are a very effective method of correcting the balance of payments. In most cases they, of course, do prove an effective weapon. But it is not certain that they would always prove effective. As duties are levied, people may spend less on foreign imports. But the part of income thus released may be spent on goods which were being exported. In such a case, exports also fall. Or, the sums mentioned above may be spent on those imports which are untaxed or less taxed. Total imports may, thus, not diminish.

(d) *Administrative devices.* Administrative devices refer to interpretation of customs rules in a manner which proves harassing and discouraging to importers. If duty is to be charged *ad valorem*, customs officials may refuse to admit the validity of invoices and may fix a price which is substantially higher than the actual price. Classifications of articles of imports invariably leave much scope for the customs authorities to be arbitrary in their decisions. Thus a chair may be treated as a household article or a luxury article, and the rate of duty may be much higher for the latter than for the former. In the same category may be placed the famous case of the Dutch manufacturer whose figs were not allowed to be imported into U.S.A., because the figs had undergone a candying process and candied figs could not be admitted, because "Figs" and not "Candied Figs" was the item which could be found in the list of tariff rates. Imports of cigarettes may not be permitted on the plea that while each packet bears the name of the country of origin, each cigarette does not. Even veterinary and sanitary regulations are sometimes employed to embarrass the foreign trader.

(e) *Quota system.* Quota system is also a method of restricting imports. It consists in permitting imports in smaller quantities than before. There are two important ways of fixing the quota. One is fixing the quantities of various commodities which would be imported. The other is fixing the values worth of which various commodities would be imported. The latter method is more sensible because, after all, the purpose is to import less values and not to import smaller quantities.

(f) *Exchange control.* This method consists in keeping a strict watch over export earnings, and a strict control over expenditure of foreign exchange which becomes available. All those who earn foreign exchange have to surrender it to a central pool. Then the authority which controls the pool rations out the scarce foreign exchange among various items in accordance with a strict system of priorities laid down by the government. This method is considered to be the most effective—and, hence, the surest and the most dependable—method of adjusting debit items to credit items of the balance of payments.

All the above methods, monetary as well as non-monetary, have been used by different countries at different times. The method of import duties is, however, the most widely used method. The method of bounties is rather rarely used. And the methods of devaluation, de-

flation, quotas, and exchange control are considered desperate methods, therefore they are used only when milder methods refuse to help.

The questions of devaluation, quota system, and exchange control need further elucidation. We now propose to deal with them in a little more detail.

DEVALUATION

Meaning. Devaluation means a deliberate and calculated reduction in the external value of domestic currency. It has relevance only when the exchange rate of domestic currency is not free to be determined by the forces of the market, i.e. when it is maintained at some level by the authorities. When countries are on the gold standard, exchange rate is kept fixed by free coinage as well as by unhindered import and export of gold. In this case devaluation can be done by clipping the domestic currency so that its gold content is reduced. When countries are on paper standards, exchange rate of a currency can be kept fixed by legally binding the monetary authority of the country to buy and sell foreign exchange, up to unlimited amounts, at a fixed rate. Devaluation in this case is achieved by raising the official rate at which foreign exchange is bought and sold by the monetary authority.

Immediate effects of devaluation. Devaluation reduces the value of domestic currency in terms of foreign currency and, which comes to the same thing, it raises the value of foreign currency in terms of domestic currency. It is self-evident that foreign balances held by residents rise in value while balances held by the foreigners in this country fall in value. In this respect residents gain and the foreigners lose. But now every remittance abroad—say to a student—costs more domestic money. Similarly if a foreigner remits a given sum of money to this country, he has to pay less of his own money. This entails a hardship on residents and brings gains to foreigners.

Short-run effects. As we devalue our currency, it becomes cheaper for the foreigners. Assuming our prices to remain the same, our goods become cheaper for them. This encourages our exports. Also, a fall in the exchange rate of our currency implies that foreign currencies have become dearer. Given the prices of foreign goods in their respective countries, they become dearer for the residents of our country. Our imports, therefore, shrink. Increase in exports and shrinkage in imports are the short-run effects of a fall in the exchange rate of our currency.

Will that mean more foreign earnings and less foreign debits? It all depends on the elasticities of demand for exports and imports. If the elasticity of demand for exports is unity, quantum of exports will increase but export earnings will remain the same. If this elasticity is less than unity, exports will increase but total export earnings will be actually less than before. Total export earnings will increase only if the elasticity of demand for them is more than unity. Similarly total debits

resulting from our imports will decrease only if the elasticity of our demand for them is more than unity. Hence *total* export earnings will rise and *total* payments for imports will fall only if the demand for our exports and imports is elastic.

Ultimate effects. Consequent on a fall in the exchange rate, exports become cheaper for foreigners and imports become dearer for residents. This is, however, what happens immediately. Ultimately changes in demand for exports and imports bring about changes in domestic as well as foreign price levels.¹ After some time, prices at home rise and prices abroad fall. Initial advantage will then have been lost. The only trace left will be the new business contacts developed with purchasers of exports. As a result of these contacts some of the gains in increased exports may stick on.

Conclusions are: first, that immediate increase in export earnings and fall in import obligations depend respectively on elasticities of demand for exports and for imports; second, that immediate gain is bound to disappear and ultimate gain depends on how far good business contacts have been created in foreign markets in the meanwhile.

QUOTA SYSTEM

Meaning. Quota system refers to quantitative restriction of imports. It may be that a certain fixed quantity is allowed to be imported, duty free or on payment of a low rate of duty, additional imports being permitted in unlimited amounts on payment of a higher rate of duty. This is known as *tariff quota*. When there is exchange control, and the exchange authority releases only a limited amount of exchange for the import of a commodity, it is called *exchange quota*. The system of exchange quota has been very common in recent years as a large number of countries have adopted exchange control. Problems of exchange quota are the problems of exchange control which we shall discuss presently. An important form of quota system is the method of *import quota*, in which a fixed quantity, and no more, is allowed to be imported. This system was first adopted by France in 1931. By 1934, she had fixed quotas for more than seven thousand items.

Allotment of quotas. When an import quota is fixed on a global basis, i.e. without reference to the countries of origin, there is a discrimination in favour of neighbouring countries, since their goods can arrive earlier than the goods of distant countries. In global quotas, supplies are not evenly spread over the whole period; large quantities are rushed into the country at the beginning of the quota period. When the quota has been imported, remaining goods which have already arrived at the ports, or are on their way, rot for some time at the ports and then travel back. This is a source of loss as well as embarrassment to dealers. It is, therefore, proper that quotas are allotted. But how?

If quotas are distributed among importers on the basis of their imports in the past, it freezes *status quo*. It makes it impossible for

1 Explanation of this will be given in the next chapter.

new entrants, however adventurous and promising, to share the trade. It was to avoid this that authorities in India have been earmarking a part of the quota for new-comers and the rest for established importers. The fact, however, remains that established importers get the lion's share.

Quotas may be allotted to dealers in exporting countries. In that case profits, which arise from a higher price in the importing country, are apt to be pocketed by the traders of exporting countries.

The most important effect of fixing a quota is to divorce domestic price from foreign price. As the quantity imported is not allowed to adjust itself to the price prevailing in the home country, domestic price comes to stand higher than the price in the exporting country (or countries). Profit-margin is thus large and is enjoyed by those to whom quotas are allotted. Fixture of quota is, therefore, a kind of discrimination either in favour of neighbouring countries or in favour of allottees. This discrimination can be avoided if import licences are openly auctioned by the government and are made transferable. This method has not, however, yet been adopted by any government.

Merits of quota system. Certain merits have been claimed for the system of import quotas. If a country decides to import a smaller quantity of a commodity, it can achieve this objective by suitably raising the import duty. But *exactly how much* increase in import duty will suit the purpose, is difficult to determine in practice. Method of import quota, on the other hand, is a very certain instrument for the purpose. Moreover, changes in import duties involve elaborate legislative procedure. In some cases the requisite increases in import duties may be extremely high. Or, import duties may be bound by treaties and it may not be possible to raise them. For all these reasons fixture of quotas is easier and preferable. Also, import quotas are not subject to general clauses of agreements with foreign countries. Import quotas are a better method of checking unemployment than import duties.

Demerits of quota system. Import quotas are, however, very injurious to international trade. They are ranked among very restrictive devices. They violently interfere with the free functioning of price mechanism. Another demerit is that, though quota system like import duties reduces imports, yet while import duties bring a revenue to the government, quotas do not. Moreover, as we have noticed above, they lead to concentration of imports in the earlier part of the quota period. Global quotas discriminate against countries. If quotas are allotted to importers, long-established firms enjoy windfall profits while new entrants suffer hardship. If quotas are allotted by countries, profits go to foreigners and it becomes difficult to ensure that exporters will send good qualities of goods. In fact, rigid quotas are much more injurious than tariffs as they violently interfere with competitive market process and are not consistent with equality of treatment. Method of free auctioning, mentioned above, may reduce its evil effects if there are no secret quotas and the date and venue of auction are given full publicity.

EXCHANGE CONTROL

What is exchange control? The term 'exchange control' may be stretched to mean any intervention on the part of authorities in the free working of foreign exchange market. For instance, the government of a country may prohibit the sale of foreign exchange except for trading requirements or for reasonable travelling expenses, the purpose being to check outflow of capital investments. But no official control apparatus may be established. Only banks of the country may be asked to see that the order is not violated.

Exchange control has, however, come to imply a complete suspension of open market in foreign exchange. A Central Authority is constituted. All transactions in foreign exchange are subject to the assent of this authority. In most cases, the Exchange Authority becomes the sole dealer in foreign exchange. It maintains a Central Pool of foreign exchange. All those, who earn foreign exchange, surrender it to the Central Pool. A system of licences for exports and imports is an essential feature of exchange control. Export licences are issued on the condition that the foreign exchange would not be invested abroad but will be handed over to the Exchange Authority. Exporters of services and recipients of interest and amortisation payments also have to surrender foreign currency to the same authority. Foreign credits, securities, and titles to property held by the nationals are mobilised and the proceeds added to the Central Pool. The demand for foreign exchange is reduced to the minimum. A system of priorities is introduced. Repayments of debts due to foreigners are suspended. Nationals going abroad are allowed small sums for expenditure. A distinction is made between "necessary" and "superfluous" imports, and import licences are issued only in respect of the former. Efforts are made to increase the supply of foreign exchange by encouraging exports by various methods. Of these, one particular method is that foreigners are allowed to withdraw their deposits from the country only at below the contractual rate. The saving thus made is given as subsidy to exporters. Exchange control is considered to be the most restrictive of all devices as it completely severs connection between the domestic price level and the foreign price level.

Why exchange control is adopted. There are four circumstances under which exchange control may be adopted. The first is the circumstance when a country is experiencing 'flight of capital'. Nationals are investing abroad and foreigners are withdrawing their investments; not because interest rates are lower at home but because they fear a deterioration in the domestic economy. In such a case tariffs and quantitative trade restrictions are of no avail as they cannot remove the fear-complex. Methods of credit control operate slowly. They may further disturb confidence and also lower prices and increase unemployment. Devaluation cannot be resorted to as it may further lower confidence in the stability of the currency. Thus when exports of capital are motivated by fear, the only effective way open to authorities is exchange control.

The second circumstance arises when a country is faced with a

chronically adverse balance of payments in a period of acute depression. Prices are falling sharply, foreign currencies are depreciating, and foreign credit is not available. A disequilibrium in the balance of payments in these circumstances threatens to exhaust reserves of gold and foreign exchange which are, after all, meant to meet only temporary deficits. Deflation in such a case will increase unemployment which is already large. Devaluation, if adopted, has to be a continuous process because foreign currencies are constantly depreciating. Raising of tariffs or fixture of quotas are considered too slow or too cumbersome. The country has to take resort to exchange control.

The third circumstance is war. Exports shrink while imports for military requirements have to be stepped up. And there is shortage of shipping space. Moreover, the country concerned cannot allow national currency to fall into the hands of the enemy. The government may introduce exchange control using the limited foreign exchange in the manner in which it deems proper.

The fourth circumstance is the period of planned development. In such a period regulation of trade becomes necessary. For planning implies a system of priorities. Equipment required for starting new industries has to be imported. At the same time raw materials as well as equipment for the continuance and extension of existing industries must continue to be made available. Thus large quantities of capital goods and materials have to be imported. This causes a strain on the foreign exchange resources. Import of luxury goods and goods which are not so essential has to be suspended. A judicious use of the available exchange resources becomes unavoidable. Exchange control is the only certain method by which a selective use can be made of the foreign exchange, therefore it becomes an important instrument for planned development.

Once adopted exchange control becomes comprehensive. Exchange control was adopted by Germany in 1931 to stop flight of capital. It was soon realised that once exchange control was instituted, it must be made comprehensive. Of course, the purpose was to stop exports of capital, but that purpose could not be properly served unless all precautions were taken against evasion. Thus exchange control almost invariably leads to trade control. Moreover, the bureaucrat enjoys the exercise of his power. Once he is given some power, he endeavours to extend it and succeeds in introducing trade control on the plea of precautionary measures. An important reason for the extension of exchange control exists in the fact that exchange control severs the link between domestic prices and foreign prices. The government can adopt independent fiscal and monetary policies. It is in a position to raise internal prices and yet keep the currency externally over-valued. Independence of fiscal policies and retention of over-valued rates of currency become as much the aim of exchange control as stoppage of capital exports. In fact, since 1945, they have been the main objectives in many countries.

Spread of exchange control. Exchange control is contagious. Once adopted by some countries, it tends to spread. Exchange

control countries desire it to spread because they wish to make maximum use of bargaining power which exchange control gives them. Moreover, the currency of an exchange control country comes to have a high exchange value, and it is easier to trade with high exchange rate when other currencies are rising, or at least are not falling, in value. Another reason is that trade among exchange control countries increases and they divert their trade from free exchange countries to exchange control countries. Free exchange countries find their important markets shrinking and thus prefer to join the ring.

Methods of encouraging exports. The government of an exchange control country finds itself in a position to adopt independent monetary and fiscal policies. Generally, it follows an expansionist policy to reduce unemployment. Consequently the internal price level rises. Exports become unacceptable to foreigners. Imports have also to be reduced correspondingly, unless the government takes some steps to encourage exports. Many such steps are possible. It may enforce one rate of exchange for imports and a lower rate of exchange for exports. And it may adopt higher rates of exchange for those exports foreign demand for which is inelastic, and lower rates of exchange for those which are not acceptable to foreigners at higher prices. This is the method of *multiple exchange rates*. The second method is *private compensation*. It is another name for barter deals which are allowed in those cases where the exports involved are such as could otherwise not be sold abroad. Another method is *exchange clearing*. Country *A* concludes an agreement with another exchange control country *B*, according to which the former opens a clearing account in the Central Bank of the latter. Importers in country *B* make all payments in their national currency to this clearing account. Exporters of country *B* receive payments for their exports to country *A* from this account as their claims mature. If the amount in the clearing account proves insufficient to meet the claims of exporters of country *B*, they have to wait till importers deposit more, every exporter getting his payment by turn as deposits pour in. Thus country *A* is assured of exports to country *B* to balance its imports. Sometimes each country may open an account in the other's Central Bank. In that case, exporters of each country receive payments from the Central Bank of their own country. The two Central Banks then clear the accounts, one against the other, at regular intervals, provision being made for a certain agreed balance. Lastly, there are *payments agreements*. An agreement of this kind is generally concluded between a free exchange country on the one hand, and an exchange control country on the other. The free exchange country agrees to allow or encourage imports from the exchange control country on the condition that a given proportion of payments for such imports will be applied to paying interest on, and clearance of, past debt due from the exchange control country.

Effects of exchange control. Every exchange control country has to distribute foreign exchange among imports, tourists' expenditure and debt services. Decisions have also to be taken in respect of kinds and quantities of commodities to be imported. Evidently, such decisions

profoundly influence the production as well as consumption patterns. Then there is rationing by firms. Controls of all kinds are the bureaucrat's paradise and exchange control is no exception to it. It opens out vast scope for bribery and favouritism and is thus apt to lower the moral standards of the people. For traders, it is a source of many inconveniences. Procedure for procuring licences is generally complicated and involves much waste of time and energy.

In case many countries adopt exchange control, rationing by countries also becomes essential, because the currency of an exchange control country is not freely salable or obtainable. Country *A* can import from another exchange control country *B* only upto the limit of its holdings of *B*'s currency. Now, suppose country *A* has to import a commodity from country *B*, but *B*'s currency is not available in the Central Pool of country *A*. Then country *A* must insist that country *B* accepts payment in *A*'s currency. Country *B* may agree to accept it because of shrinking markets. By assumption, country *B* has little demand for *A*'s goods. Thus a blocked balance appears in the Central Pool of country *B*. It then tries to spend the blocked balance by making purchases from country *A* even at higher prices. Thus uncollectible balances, rather than comparative costs, come to determine the direction of foreign trade. Trade no more flows in the most profitable channels.

It is sometimes said that exchange control leads to shrinkage in international trade. Every exchange control country reduces its imports, and because of higher internal price level its exports also decrease. One cannot, however, be dogmatic in this respect. We must take into account the fact that trade is sought to be encouraged by agreements, private compensation, multiple exchange rates, subsidies to exports, etc. etc. All that can be said with certainty is that trade is diverted from its natural course into artificial channels. Considerations other than cheapness become important. Quantity of international trade may or may not diminish, its quality certainly deteriorates and the benefit of such trade is reduced.

The real defence of exchange control lies in the circumstances which lead to its adoption. It is specially suited for dealing with the problem of flight of capital. It may be said that exchange control stops imports of capital as well. But that question is not important, because fresh capital could not be expected under the circumstances. When capital is fleeing from a country, only a stupid foreigner would make a new investment there. Exchange control is also the only effective remedy for a chronically passive balance of payments in a period of acute depression. Moreover, it enables a country to follow independent policies at home to reduce unemployment. For countries which are engaged in a war or which have adopted methods of planning for the development of their economies, exchange control is an effective instrument to make the best use of their limited earnings of foreign exchange. Incidentally, exchange control provides protection to many industries, enhances the country's strength in trade bargaining,

and enables the government to earn revenue by keeping a margin between selling and buying rates of foreign currencies. Modified by private compensation and clearing and payments agreements, exchange control is helpful to those countries which find its adoption unavoidable.

PROTECTIVE TARIFFS

Meaning and forms of protection. The power of an industry to compete with foreign producers in the domestic market may be enhanced by placing restrictions on imports. This is called giving protection to the domestic industry. Restrictions for purposes of protection may take the form of total prohibition or fixture of quotas, but the usual form it takes is that of levying a high import duty on that commodity. Protective duty, as it is called, must be high enough to raise the cost of the foreign product sufficiently, so as to make it equal to, or higher than, the cost of the domestic product.

Restrictionism is the antonym of free trade. While restrictionism refers to the policy of reducing imports in general, protectionism is restricting imports of specific commodities so as to make more of the domestic market available to the indigenous producers. Hence, like restrictionism, protectionism is interference with free trade, that is with the flow of international trade in its natural channels.

Choice between free trade and protection. The question of free trade *versus* protection has been controverted for centuries. Naturally, an avalanche of arguments and counter-arguments has piled up. Economic as well as non-economic arguments have been advanced on both sides. We, as students of economics, will consider only economic implications of protection. This is not to minimise the importance of non-economic considerations. The purpose is to delimit the field of study. It is for the administrator to weigh economic considerations against political, social, and other considerations and make a final decision. We, on our part, adjudge the whole thing on economic basis.

International trade is international specialisation. Each country specialises in the production of those commodities for which its resources place it in an advantageous position. The gain from international trade would be reaped if trade is allowed its free course. Protection may be recommended in some particular cases. *As a general policy*, however, free trade is the method to benefit from international trade. Moreover, even where protection is recommended on economic considerations, it is recommended only for some period. Ultimate aim is free trade. Permanent protection may be recommended on political grounds or considerations of defence. On economic grounds, permanent protection is not recommended. Hence on economic considerations alone, though protection may be recommended for some period, yet free trade must remain the general policy and the ultimate aim.

Protection has been recommended on grounds of development of infant industries, self-sufficiency, diversification of industries, extension

of employment opportunities, government revenue, providing cover against dumping, and many other considerations. We may consider these arguments one by one.

1. *Infant Industries.* An established industry enjoys superiority over a newly started one in many respects. It can get skilled, trained and experienced workmen and entrepreneurs. It has established contacts with sources of raw material as well as with purchasers of its product. It may have made available to itself means of transport. A new industry has to acquire these facilities, contacts, and experience, and all this takes time. It may be that, considering availability of cheap labour, capital, raw materials, power, market, and suitable climate for the production of a commodity, country *A* is better placed than country *B*, but country *B* has the advantage of having somehow made an earlier start. In these circumstances, if an endeavour is made to start the production of that commodity in country *A*, the attempt may not succeed. The new industry may be nipped in the bud in competition with the mature industry of country *B*. It is in such a case that protection is recommended for the infant industry of country *A* for a period till the requisite contacts, experience and skill have been acquired.

Obviously, the protected industry will in the initial stage be producing at higher cost and the domestic consumer will be paying a penalty in the form of higher price. This is a sacrifice which the present generation makes for posterity. When hurdles have been crossed, the domestic industry will be in a position to do without protection and will easily compete with the foreigners. Without protection this industry either could not come into existence, or would have taken a longer time to establish itself. Colbert rightly likened protective duties to "cretches to teach the new manufacturers to walk."

Theoretically, the case for protecting infant industries, which can ultimately stand on their own legs, is very sound. In practice, however, many difficulties arise. In the first place, it is difficult to ascertain which industry will be ultimately able to withstand foreign competition without protection. Secondly, protection very often lulls domestic producers to a sense of complacency. There remains little inducement to effect improvements in the methods of production. The most important difficulty has been summed up in the words: "Once an infant, ever an infant". Vested interests arise and they resist the removal of, or even a reduction in, the protective tariff. Protection in such cases becomes a permanent burden on the consumer without any corresponding gain to the country.

2. *Self-sufficiency.* Mahatma Gandhi favoured a policy of over-all self-sufficiency on the ground that it will annihilate one important cause of international friction. When there is no foreign trade, the question of invading foreign countries for capturing foreign markets will not arise. Others recommend self-sufficiency in respect of specific categories of goods—defence requirements, food, raw materials and basic industries. It is generally agreed that a country ought to be self-sufficient in respect of her military requirements, especially arms

and ammunition. Defence, as Adam Smith well observed, is more important than opulence. It is obviously unwise to depend on others for tanks, cannons, guns and powder. Some people hold that self-sufficiency in respect of food is equally important. England depends on foreign countries for food. If during a war she is blockaded, she will immediately be obliged to come down to her knees. Similar arguments are advanced for independence in raw materials for important industries. If war cuts off foreign supplies of food and raw materials, people as well as industries will starve. Lastly, self-sufficiency in basic industries is recommended. The instance of India is often quoted. It is said that during the two World Wars foreign supplies were cut off and there was a good void in the Indian market. But Indian industries could not expand adequately in response to it because she could not produce the required machinery.

It may be noted that it is strained international political relations and possibilities of war which form the basis of arguments in all the above cases. From the economic standpoint, if the above categories of goods are protected, resources will get employed in un-economic ways. National production, and hence national welfare, will be lessened. And whether it is wise to regulate normal peace economy on war basis, is a question for the administrator to decide. On economic considerations alone, protection to the above categories of goods cannot be upheld.

3. *Diversification of industries.* This argument takes two forms. First, specialisation implies concentration in a few industries. This, it is said, is not wise. Depression in any single industry affects a sizeable section of the population and thus causes widespread distress. Sources of employment should, therefore, be diversified. With that aim in view, some more domestic industries may be brought into existence behind the screen of protection. But this argument strikes at the very root of the case for international specialisation. It seeks to ensure against an evil which is imaginary. And it would be an argument against all division of labour.

The other form of the argument is that as all agricultural countries are trying to industrialise themselves, industrial countries should also develop their agriculture. As more industries spring up in agricultural countries, surplus food and raw materials available for exports will diminish, and also markets of those countries will no more be available. Industrial countries will then find themselves in an impossible position. They shall get neither food for their people, nor raw materials for their industries, nor buyers for their products. Industrial countries should therefore, produce their own food and raw materials and depend on their domestic markets. This argument is similar to the self-sufficiency argument as applied to industrial countries. But self-sufficiency is advocated not for fear of political catastrophes like wars, but on economic considerations like future industrialisation of areas which are today producing primary commodities.

The argument is not acceptable. As an agricultural country

develops its industries, its agriculture also gets rationalised so that its outputs of food and raw materials increase. Also, experience shows that when an agricultural country gets industrialised, it becomes a better customer than before for other industrial countries. Lastly, if at all foreign supplies of food and materials to industrial countries dry out, this will not happen overnight. Contraction in supplies will be slow and gradual and in the meanwhile the industrial countries may adjust their economies to the new situation. Has not, for instance, Indian Union increased her own production of raw jute when she found supplies from Pakistan uncertain and undependable?

4. *Employment Opportunities.* Behind the wall of protection a country can build up or expand industries which will provide employment. As protection brings into existence industries which would otherwise not have been, more hands can be absorbed than before. Yet the question is not as simple as it appears. A number of possibilities have to be considered.

It is not to be doubted that some labourers will find employment in factories which have sprung up or expanded because of protection. This will result in reduction of imports. If other countries retaliate by duties on our exports, our exports will also diminish. Employment in export industries may thus decrease and aggregate employment in the country may not increase.

Purchasing power, which was spent on foreign imports, may now be spent on goods produced at home. Then purchasing power falls into the hands of the residents of the country who may spend it on goods, which were being exported. Exports may diminish (as shown in the last para) but their demand in the domestic market will increase. There may thus be no unemployment caused in export industries. In that case there may be a *net* increase in employment.

Protected industries may expand but other industries may contract because capital needed for the former may flow from the latter. In that case what is gained on the swings is lost on the roundabouts. Though employment remains the same, national product is less because labour is now employed in those industries for which it is less suited. But it may be that capital is imported or that some capital equipment was lying idle and now it comes into use. If it be so, there will be a larger *net* employment.

If all, or many, countries try the method of increasing employment by reducing imports, the only consequence will be a reduction in international trade and diversion of factors to less productive uses. Production and employment will fall everywhere.

As protective duties are levied, prices of imported commodities rise and so does the cost of living. Real wages fall. If trade unions are well organised, they will clamour for a rise in money wages. If money wages increase, employment in the protected industries may not rise or rise less, and employment in other industries may fall.

There may be, on the whole, no increase in employment—or there may be an actual decrease.

If, in spite of protective duties, money wages do not rise, there will be more employment as a result of reduction in real wages. But if more employment is to be achieved by a reduction in real wages, there are better methods of doing that. Method of tariff increases is not a good method for that purpose, as by this resources are diverted into unprofitable channels.

The conclusion is that protective duties may not increase employment. If at all it increases, it may be because of reduction in real wages. It is advisable to use alternative methods of reducing unemployment than the method of protective duties.

5. *Government revenue.* Protective duties, in addition to providing encouragement to industries, bring revenue to the government. In the balance sheet of protective duties, therefore, larger government earnings must be set on the credit side. However, it is uncertain if protective duties will really increase revenue of the government.

Consider the case where revenue duties existed before the rate of duty was raised to make it protective duty. Total revenue from this tax depends not only on the rate of duty but also on the quantity imported. If, as the rate is raised, the quantity imported contracts more than proportionately, total revenue from this item will be less than before. If, on the other hand, large quantities continue to be imported, it means that the duty is not high enough to give protection to the domestic industry. The two aims of protection and high government revenue are incompatible.

In case protective duty is levied where there was no duty before, some revenue will result from this item. But consumers will pay higher prices for imports and their taxable capacity will be reduced. Hence though revenue from this item increases, total revenue may not increase. If, however, the duty is on such imports as the domestic producer can ultimately replace in the long run, prosperity—hence taxable capacity—will increase.

6. *Cover against dumping.* We have already seen that there are four possible causes which may lead to dumping.² The producer might have overestimated the demand in the domestic market and now prefers to sell the excess amount in some foreign market, rather than spoil the domestic market. Secondly, may be that the producer is undercutting his rivals to weed them out. Or, dumping may result from the fact of increasing returns, or from difference in marginal revenues in the two markets at single monopoly price.

When a producer dumps his product to avoid spoiling the domestic market, that means he spoils the foreign market. The country, in whose market the product is being dumped, will be well advised to

protect its domestic industry by levying a high duty on such imports. Similarly, the purpose of the producer, who undercuts his rivals, is to eliminate competition and then to raise the price. Temporary gain from lower price is insignificant against the ultimate loss from a higher price. Against such imports also protective duties may be levied. When, however, the producer produces more to benefit from increasing returns or from differences in marginal revenue and sells in the foreign market at a lower price, the benefit of lower price promises to be a permanent one to the country to which the goods are being dumped. In such a case protection will mean denying the people the benefit of cheaper imports.

Protection against dumping can, therefore, be recommended when dumping is temporary. If dumping promises to become permanent, protection against it is harmful to the interests of the country. In practice, it is well-nigh impossible to determine the exact cause and nature of dumping, therefore it becomes difficult to decide whether it should be protected against or not.

7. *Other arguments.* Some times some very flimsy arguments are advanced for protection—or, better still, for restriction of imports because the objective is not to protect particular industries, but restriction of imports.

One such argument is that by levying import duties on goods coming from countries where wages are low, a country can protect the higher wages of its workers. It is asserted that industries of the country in question cannot compete with foreign goods because foreigners pay lower wages. This argument has no substance in it. After all free trade, as we have seen in the last chapter, adjusts wages in different countries in accordance with comparative efficiencies of their labour. And if labour of the country in question is not so efficient, high wages cannot be maintained even otherwise. Moreover, this country may protect its labour in "import industries", how will it achieve the same objective in respect of export industries. If wages in this country are disproportionately high, it will fail to sell abroad and the problem will be one of a continued unfavourable balance of payments.

Similarly some people say that reduction in imports will conserve purchasing power. The argument is put in the famous words allegedly spoken by Abraham Lincoln: "I do not know much about tariff, but I know this much, when we buy manufactured goods abroad, we get goods and the foreigners get money. When we buy the manufactured goods at home, we get both the goods and the money." The statement is based on two misconceptions. First, it assumes that it is money, and not goods, which a people really need. This is evidently absurd. Secondly, it assumes that imports are paid for by money, which is incorrect because they are actually paid for by exports. Hence we must agree with Sir William Beveridge that the only sensible words in the above statement are the first eight.

8. *Conclusion.* We may conclude that only the infant-industry

argument and the cover-against-dumping argument have some substance in them. Yet even in respect of these, genuine cases are difficult to sift. And even in genuine cases protection must be a temporary measure.

COMMERCIAL TREATIES

Meaning and classification. Commercial treaties are deliberate efforts on the part of countries to promote mutual trade. The treaties may relate to consular matters, rights of foreigners, execution of customs regulations, and other allied matters. Economists have, however, come to attach a restricted meaning to the expression. In economics the term "commercial treaties" refers to agreements in respect of tariff rates, quotas, or exchange restrictions. Agreements in respect of tariff rates are called tariff agreements and those in respect of quotas and exchange restrictions are called trade agreements. An agreement between two countries is a bilateral treaty. A multilateral treaty is among more than two countries. A multilateral treaty may be a collective agreement between an associated group of countries like members of the Commonwealth of Nations; or it may be an international convention to which a majority of the countries of the world are signatories.

Most-favoured-nation clause. An important clause in most of the commercial treaties is what has come to be known as the most-favoured-nation (m.f.n.) clause. If this clause is embodied in a treaty between country *A* and country *B*, then country *A* promises to accord to the nationals and goods of country *B* a treatment, which is not worse than the treatment it gives to the nationals and goods of any other country. Similarly does country *B*. There may be a pure most-favoured-nation clause treaty, or the clause may be included in other commercial treaties. Inclusion of the m.f.n. clause in most of the commercial treaties has been an important factor in helping towards extension of international trade.

Agreements to accord m.f.n. treatment have been acclaimed as the most suitable policy for many countries. Free Trade countries have no concessions to give. All that they have to offer is a promise that they will not levy any duties, or will not raise revenue duties. Most-favoured-nation system is appropriate to their requirements. This system also suits those countries which are particular to keep their fiscal autonomy intact. It permits such countries to raise import duties or levy new ones only if there is no discrimination against the agreement countries. In fact, chief merit of the m.f.n. system is that it stands for equality of treatment and elimination of discrimination.

Conditional and unconditional m.f.n. clause. Most-favoured-nation clause—the promise to treat imports from the agreement country no worse than imports from any other country—may be of conditional or unconditional variety. In case it is unconditional, then if one of the signatories to the agreement gives any tariff concession to a third country, the other signatory immediately and automatically becomes entitled to it.

If it is a conditional m.f.n. clause, concession granted by a signatory to a third party can be claimed by the other signatory only if the latter gives to the former the same or an equal concession which the third party has given.

The chief argument against unconditional form of m.f.n. clause is that it reduces the possibilities of further treaties. Further agreements are either not concluded, or only limited concessions are exchanged. Provisions are cleverly worded so as to circumvent in all possible ways their extension by m.f.n. clause. Countries are reluctant to participate in international conventions, as non-participants can claim concessions as a matter of right and without giving any concessions in return. Negatively, it is also claimed that even if conditional m.f.n. clause does not promise equality of tariffs, it does offer equality of opportunity.

Protagonists of the unconditional m.f.n. clause hold that the conditional variety is the very negation of the most-favoured-nation treatment. We are well aware that "equal concessions" are difficult to define. There is no objective standard by which equality could be established. Suppose, for instance, countries *A* and *B* have an m.f.n. agreement and country *A* lowers import duty on wheat from country *C* while country *C* lowers duty on toys from country *A*. Now, country *B* may be sending wheat to country *A*, but may be importing sugar, and not toys, from country *A*. How much reduction in duty on sugar should be considered equal to a given reduction in the duty on toys, is not possible to say. Moreover, the basic aim of m.f.n. system is that neither of the parties is, in matters of trade and tariffs, discriminated against by the other. Conditional form of m.f.n. clause does not rule out discrimination. And neither does it simplify trade nor eliminate economic conflicts. Lastly, conditional clause proves unfair for those countries which have very few or very low duties. Such countries have few concessions to offer and thus cannot benefit even from m.f.n. system.

Real promoters of international trade. It must be clearly borne in mind that treaties by themselves do not create trade. All that they can do is to create a proper atmosphere for the development of trade. Political stability and peace, high level of output and employment, and determination on the part of dealers to make the fullest use of international specialisation, are some of the factors which promote international trade.

Further Readings:

1. Barret Whale : *International Trade*, Chs. IV, VI and VII.
2. Krause : *The International Economy*, Chs. 3, 5, 6, 7, 8, 9 and 10.
3. Haberler : *International Trade*, Chs. 2 and 7.

CHAPTER XXXVIII

FOREIGN EXCHANGE

PRELIMINARY CONSIDERATIONS

Meaning of exchange rate. Just as there are markets for purchase and sale of commodities, similarly there are markets for the purchase and sale of foreign currencies. These are known as foreign exchange markets. The value, which a unit of domestic currency commands in terms of foreign currencies in such markets, is known as the foreign exchange rate.¹ Though exchange value of the domestic currency can be expressed in as many terms as there are foreign currencies, yet all these expressions convey the same value. For instance, exchange rate of rupee may be expressed as 1/5th. of a dollar, or 1/15th. of a pound sterling.² But as a pound will also be exchangeable for three dollars, the two expressions refer to the same value. Foreign value of a currency is, therefore, spoken of as an exchange rate, rather than exchange rates.

Assumptions. In the discussion of exchange rate we shall, for convenience, assume that there are only two countries, *A* and *B*. We shall name their respective currencies as *A*-money and *B*-money. *A* will be taken as the home country and *B* as foreign country. When a unit of *A*-money comes to command more of *B*-money, exchange rate will be said to have risen.³ Conversely, when a given quantity of *A*-money exchanges for less *B*-money, exchange rate will be spoken of as having fallen.

Demand and supply. A casual view of foreign exchange operations gives the impression that there are four factors involved in determining exchange rate, namely supply of *A*-money, demand for *A*-money, supply of *B*-money and demand for *B*-money. On a little reflection, however, it will be realised that demand for *B*-money is synonymous with supply of *A*-money, and that supply of *B*-money is the same thing as demand for *A*-money. A purchaser of foreign currency (*B*-money) offers domestic currency (*A*-money) in exchange for it. A supply of domestic currency (*A*-money) is, therefore, simultaneously created with demand for foreign currency (*B*-money). Larger the

1 There are two ways in which exchange rate may be expressed. It may be defined as the number of units of domestic currency which exchange for a unit of foreign currency. Or, it may be defined as the number of units of foreign currency which exchange for one unit of domestic currency. Quotations on the continent of Europe are based on the first definition, and quotations in the London market follow the second. We shall follow the London practice.

2 The exchange rate quoted here is a little different from the actual. Actual exchange rate for a rupee is \$21/100 or £ 3/40.

3 According to the continental practice this would be called a fall in the exchange rate.

quantity of *B*-money which he desires to purchase, larger, it means, is the amount of *A*-money which he offers. For instance, suppose the rate of exchange between rupee and dollar is 5:1. A person who purchases ten dollars can also be said to have sold fifty rupees. Similarly a purchaser of twenty dollars creates a supply of one hundred rupees. Conversely, a seller of foreign currency creates a demand for domestic currency.

Thus there are two factors involved in determining the exchange value of a currency. These are : the supply of it and the demand for it in the foreign exchange market. Exchange rate is determined by interaction of the forces of supply and demand. Equilibrium rate is one which brings into balance these two sets of forces.

Market rate and normal rate. There is an exchange rate at which equilibrium is established between demand and supply on any market day. Such a rate is the market rate. Market exchange rate fluctuates from day-to-day an account of changes in conditions of demand and supply. But there is a level around which these fluctuations occur and towards which market rate is always tending. This level is called the normal rate.

Different theories. When a country is not on a metallic standard and the government does not regulate the exchange rate so that it is free to move, determination of the market rate is explained by the Balance of Payments Theory, and the determination of the normal rate is explained by the Theory of Purchasing Power Parity. In respect of exchange rate between countries on the gold standard or any other mono-metallic standard, the relevant theory for normal rate is the Mint Par of Exchange Theory. We shall take up the latter first.

MINT PAR OF EXCHANGE THEORY

Mint Par. As has already been observed, this theory explains the determination of exchange rate between countries which are on the same mono-metallic standard. Our two countries, *A* and *B*, are therefore now on the gold standard, say the gold currency standard, to be concrete. Both *A*-money and *B*-money are gold coins which can be freely coined as well as melted. Also, there is no restriction, whatsoever, on gold movements between *A* and *B*.

As explained in chapter XXXIV, exchange rate between the two currencies will depend on their respective mint values. A given quantity of gold is convertible at the mint in country *A* into one unit of *A*-money. If the same quantity of gold is coined in country *B* into, say, five units of *B*-money, then the rate of exchange will be 1 : 5. It can neither be higher nor lower. If the rate is higher, say 1 : 6, people will exchange *A*-money for *B*-money, melt it and offer the gold thus obtained for minting in country *A*. As *B*-money is melted, its supply will decrease and its value will rise. More of *A*-money is minted, therefore, its supply will increase and its value will fall. As a result of both these

effects value of a unit of *A*-money will fall to five units of *B*-money. Quite similarly, if the rate is lower than $1:5$, gold will be exported from country *A*, which will increase the quantity of *B*-money and reduce that of *A*-money. The value of *A*-money will rise. Thus the rate of exchange cannot, for any considerable time, be higher or lower than $1:5$. Rate of exchange thus established between the two currencies in accordance with their mint rates is known as the *mint par of exchange*.

Specie points. The above analysis neglects one important factor. It is the cost of transportation, in the wider sense of the term (*i.e.* including customs duties, and banking, insurance and other charges). For instance, suppose the amount of gold contained in one unit of *A*-money, costs $\frac{1}{2}$ unit of *B*-money to transport from one country to the other. Then the rate of exchange may fall as low as $1:4\frac{1}{2}$ or may rise as high as $1:5\frac{1}{2}$. Let us explain this.

A resident of country *A*, who has to make a payment to a dealer in country *B*, does so either by exporting gold or by purchasing a bill of exchange. Suppose the bill of exchange is available dear, say it is available at the rate $1:4\frac{1}{2}$. The choice is then between procuring a command over the foreign currency by a bill of exchange at the rate of $1:4\frac{1}{2}$ and procuring foreign currency by export of gold. By melting a unit of his currency, he procures gold which will be convertible into five units of *B*-money, but in transporting it he has to incur a cost of $\frac{1}{2}$ unit of *B*-money. In effect, he gets $4\frac{1}{2}$ units of *B*-money for one unit of *A*-money. So long as, therefore, he can purchase a bill of exchange at the rate of more than $4\frac{1}{2}$ units of *B*-money for one unit of *A*-money, he will prefer it. Of course, if the rate quoted in the bill gives him less than $4\frac{1}{2}$ units of *B*-money *per* unit of *A*-money, he will export gold.

Similarly, an importer in country *B* will rather export gold than purchase a bill of exchange if, for the latter, he has to pay at the rate of more than $5\frac{1}{2}$ units of *B*-money for one unit of *A*-money. But so long as the value of a unit of *A*-money is less than $5\frac{1}{2}$ units of *B*-money, he will prefer a bill of exchange to exporting gold.

Thus even between gold standard countries there is not a fixed rate of exchange. There are two limits between which the exchange rate may fluctuate. These limits are called *specie points*. From the point of view of country *A*, in our example above, $1:4\frac{1}{2}$ is the lower specie point. At this rate gold begins to be exported from this country. It is, therefore, also its gold-export point. The other limit, *i.e.* $1:5\frac{1}{2}$, is the upper specie point and is also the gold-import point. What is gold-export point for country *A*, is gold-import point for country *B*, and the former's gold-import point is the latter's gold-export point.

Specie points and elasticities of demand and supply. Rate of exchange between two countries on the gold standard may fluctuate between the two specie points. It tends to be such that demand for and supply of bills of exchange become equal. If demand in country *A*

for bills of exchange which represent titles to *B*-money, is greater than supply of such bills, the rate of exchange, or the external value of *A*-money, will fall (*i.e.* that of *B*-money will rise) till demand and supply are equalised. Contrariwise, if demand for such bill falls short of supply, rate of exchange will so change that the two are balanced. Now, it may be that demand for and supply of bills of exchange at the prevailing rate of exchange are widely different, so that no change in it within the range of specie points can equalise it. What will happen in that case ?

The problem can be more clearly stated with the help of a diagram. In Fig. 38.1, *SS* is the supply curve and *D₁D₁* the demand curve. *OQ* is the upper specie point. Equilibrium will be reached with rate of exchange *P₁M₁*. Now suppose that country *B* imports securities from (*i.e.* exports capital to) country *A*. Demand for *A*-money will increase. Let the new demand curve be *D₂D₂*. Rate of exchange will rise to *P₂M₂* at which the larger supply, *OM₂*, equals amount demanded. Similarly if the demand curve shifts to position *D₃D₃*, rate of exchange will rise to *SM₃*, which will extend supply sufficiently to balance demand. If, however, the demand curve shifts further to *D₄D₄*, rate of exchange will not rise any more because the specie point has been reached. As the rate of exchange does not rise further, supply of *A*-money (bills of exchange) will not rise beyond *OM₃*. How does the problem solve itself ?

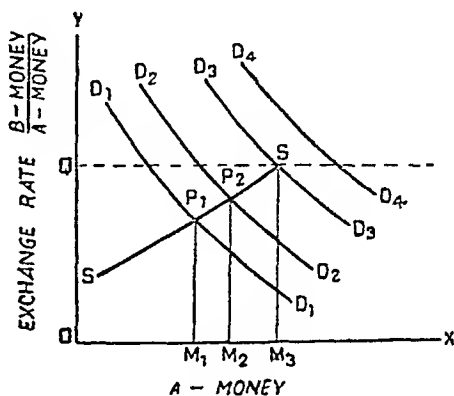


Fig. 38.1

The answer is that the balance will be made up by export of gold. The fact of the matter is that at this point exchange rate has reached the limit of its capacity to perform the equilibrating function. But at this point supply of gold becomes perfectly elastic and gold movements take over the function of balancing demand and supply.

In the performance of this function, gold movements are assisted by two factors. First, gold movements produce other changes in the two countries. Shipment of gold from country *B* to country *A* lowers incomes and expenditures in the former and raises them in the latter. Prices may rise in country *A* and fall in country *B*. Thus exports from *B* are encouraged and supply of *A*-money increases. And demand for *A*-money decreases due to reduction of imports into country *B*. Secondly, export of gold from country *B* leads to expansion of credit in

country *A* and its contraction in country *B*. These changes in credit produce the same effects as shipment of gold itself.

When exchange rate has fallen to the lower specie point due to an increase in the supply of *A*-money (DM_3 in Fig. 38.2) and still the demand for *A*-money falls short of its supply, gold will be exported from country *A*. This, assisted by changes in credit, will, quite in a similar manner, bring about equilibrium.

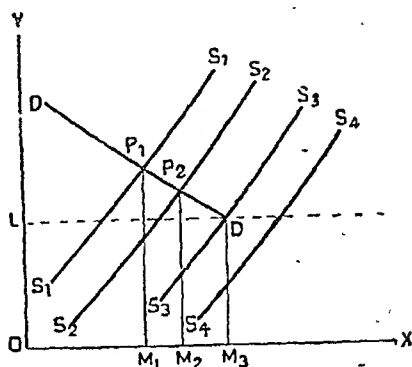


Fig. 38.2.

BALANCE OF PAYMENTS THEORY

The standards. Now we come to the case of free exchanges. This means that country *A* and country *B* (or, at least one of them) are on paper standard. Neither the value of *A*-money nor of *B*-money is linked with any metal—gold, silver, or any other. These currencies are accepted because of their legal tender status. And their internal values are maintained by regulation of their supplies to the public.

The crude version. In its crude form the balance of payments theory was stated thus: "Exchange rate of the currency of a country depends on its balance of payments. A favourable balance of payments pushes the rate of exchange up, and an unfavourable balance causes it to fall." This version of the theory fails to recognize that balance of payments itself is not independent of the rate of exchange. Values of the credit and debit items do obviously depend on the exchange rate. At a lower rate of exchange, *given* items will be worth less foreign money. Also, with a fall in the exchange rate exports will increase and, therefore, credit items will increase. Similarly when exchange rate falls, debit items diminish and their value is likely to be less.

Crude version of the balance of payments theory, thus, treats credit and debit sides of the balance of payments as solids, while they must be treated as liquids. In economic parlance, credit and debit items are treated as given quantities while they must be considered as schedules or curves.

Slope of demand and supply curves. Modern version of the theory treats credit and debit items of the balance of payments as schedules or curves. When a resident of country *B* demands *A*-money, what he, in fact, requires is goods and services of country *A*, and *A*-money gives him command over these goods and services. If exchange rate so changes that less of *A*-money can be had for a given quantity of *B*-money, then, assuming prices in the two countries

as given, a given quantity of *B*-money will give him command over a smaller quantity of goods and services of country *A*. In other words, when *A* money becomes dear, for him goods and services of country *A* become dear. In accordance with the law of demand, he will be prepared to buy less of these goods and services, and hence, less of *A*-money. Thus, when rate of exchange rises, less *A* of-money is demanded and *vice versa*. This means that demand curve for a currency in the foreign exchange market slopes downwards to the right.

Offer of home currency implies offer of command over domestic goods and services. And a fall in exchange rate means a fall in the price offered for such a command. In accordance with the law of supply, amount offered for sale will be less. Thus when exchange rate falls, supply of domestic currency in the foreign exchange market declines. And when exchange rate rises, amount supplied of it extends. Supply curve of a currency in the foreign exchange market, thus, slopes upwards to the right.

Elasticities of demand and supply curves. If the quantity of domestic currency demanded in the foreign exchange market is the same, whatever the rate of exchange, the demand is said to be inelastic. In our example, this will happen if country *B* has a fixed payment to make every year in *A*-money. On the other hand, if country *A* has to make a fixed payment in *A*-money to country *B* every year, the supply of *A*-money will be inelastic.

Demand for a currency will be perfectly elastic if there is an unlimited purchaser of it at the prevailing rate. Similarly supply of it will be perfectly elastic if there is an unlimited seller. Obviously, none else than a government can be such a purchaser or seller. But a government can be an unlimited supplier of domestic currency, it cannot be an unlimited purchaser, because it does not possess an unlimited stock of foreign exchange.

Determination of exchange rate. Let us now draw the supply and demand curves of *A*-money.

In Fig. 38.3, exchange rate (*B*-money/*A*-money) is shown along the vertical axis and the quantity of *A*-money is shown along the horizontal axis. *DD* is the demand curve and *SS* the supply curve. The former slants downwards while the latter slants upwards. The two curves intersect at *P*. This is the point of equilibrium. Equilibrium rate of exchange is *OL* (or *PM*). At this rate, quantity of *A*-money demanded equals quantity supplied, both being

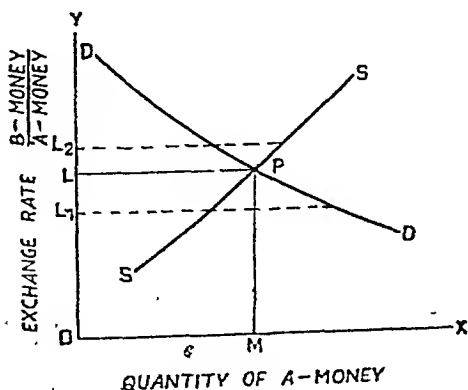


Fig. 38.3

OM. At any other rate there will be an inequality between the two, and hence disequilibrium. For instance, if the rate is OL_1 , amount demanded exceeds amount offered for sale. On the other hand, if it is OL_2 , amount offered for sale exceeds amount demanded. It is only with exchange rate OL that both are equal.

Changes in demand and supply. The demand curve for a currency shows different amounts of it which will be purchased at various rates of exchange. It assumes other determinants of demand as given. These other factors are tastes, internal costs and prices, tariffs, costs of transportation, interest rates and political and other factors leading to a change in trade and capital flows. A change in any one or more of these factors will change demand, *i.e.* will cause a shift in the demand curve. For instance, if country *B* raises its import duties, its imports from country *A* at any given rate of exchange will be less than before and, hence, the demand curve for *A*-money will shift to the left.

Changes in the supply of a currency are caused by similar factors because supply of one currency is synonymous with demand for the other currency. For instance, if country *A* raises import duties, *B*'s exports to it will decrease. The result of it may be expressed either by saying that demand for *B*-money will decrease or that supply of *A*-money will decrease.

An increase in demand for domestic currency raises exchange

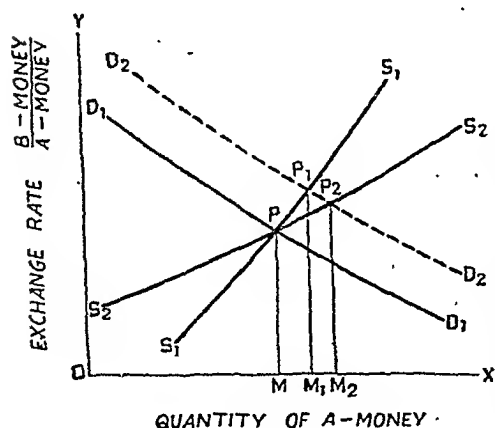


Fig. 38.4

rate and extends equilibrium amount. The extent of these changes depends on elasticity of the supply curve in the relevant portion. For example, in Fig. 38.4 are shown two supply curves, S_1S_1 and S_2S_2 , the latter having greater elasticity in the relevant portion. When the demand curve shifts from D_1D_1 to D_2D_2 , exchange rate rises and the quantity extends in both cases. But in the case of S_1S_1 , where elasticity of supply is higher, the change is reflected more in the extension of quantity than in the rise of exchange rate.

On the other hand, in the case of S_2S_2 the change in exchange rate is more and the change in quantity less. Hence greater the elasticity of supply, greater is the effect of a change in demand on amount and less is the effect on exchange rate, and *vice versa*. In the extreme case, supply is inelastic and there will be no change in amount: the whole effect will consist of a change in the exchange rate. Similarly

if supply is perfectly elastic, there will no change in the exchange rate, the whole effect being on amount. What is true of an increase in demand is also *mutatis mutandis* true of a decrease in demand.

The effect of an increase in supply is to lower exchange rate and to extend equilibrium amount. The effect of a decrease in supply is just the reverse. Fig. 38.5 shows that the effect of a change in supply depends on the elasticity of the demand curve in the relevant portion. D_1D_1 and D_2D_2 are two demand curves, the latter having greater elasticity in the relevant portion. When the supply curve shifts from S_1S_1 to S_2S_2 , there is an extension in the amount and a fall in the exchange rate in both cases. With D_1D_1 , however, the change is reflected more in a fall in the exchange rate, rather than in an extension of the amount. Reverse is the case with D_2D_2 . Hence greater the elasticity of demand, greater is the extension in amount and less is the fall in exchange rate, and *vice versa*. When demand is inelastic, there is no effect on the amount. And when demand is perfectly elastic, there is no effect on the exchange rate.

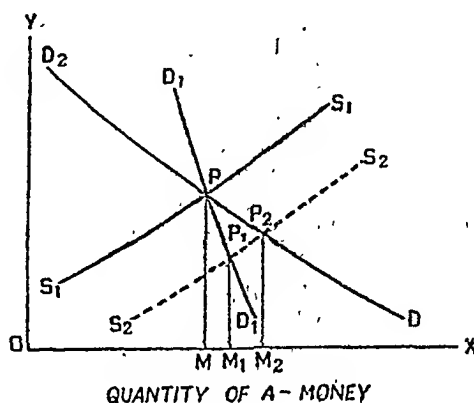


Fig. 38.5

PURCHASING POWER PARITY THEORY

Assumptions. We now trace the factors which determine normal exchange rate between countries which are not on a mono-metallic standard. Thus we assume again that both the countries are on paper standard.

Outline of the theory. When A-money is exchanged for B-money, what in reality have been exchanged are two purchasing powers. Command over goods and services in country A has been given to secure command over goods and services in country B. So that the rate of exchange is in equilibrium, it is necessary that goods and services surrendered have the same value as goods and services secured. To be more concrete, if the rate of exchange between A-money and B-money is 1 : 5, then the quantity of goods and services in general which one unit of A-money can purchase in country A, must command in country B a price of five units of B-money. If it is not so, there will be disequilibrium.

For instance, suppose that rate of exchange between the two countries is 1 : 5, but price levels in the two countries are such that what

can be had for one unit of *A*-money in country *A*, can be purchased in country *B* for four units of *B*-money. Price level in country *B* is, then, lower than in country *A*. Exports from the former will be large and country *A* will have an adverse balance of payments. Either the price level in country *B* will rise as a result of large exports, or the same in country *A* will fall due to large imports, or the exchange rate will change as a result of imbalance. It may also be that two or three of these changes occur simultaneously till equilibrium position is reached. In other words, in a state of equilibrium the exchange rate must correctly reflect the price levels in the two countries. It settles at a level where the price levels of the two countries are made equal.

The theory can be stated in yet another manner. Goods and services, which a unit of *A*-money can purchase in its own country, measure its internal value. When this money is converted into *B*-money, a command over goods and services of country *B* is secured. This is external value of *A*-money. Rate of exchange must be such that internal value of the currency equals its external value.

Price levels of domestic goods and international goods. There are certain commodities which cannot be exported, e.g. houses. Such commodities may be called domestic goods. There are other commodities which are either being exported or can be exported if prices abroad are suitable. These may be called international goods. The question, then, arises whether the price levels which exchange rate equalises are the general price levels (i.e. of domestic goods and international goods taken together) or the price levels of international goods only.

It is evident that when there is disequilibrium, equilibrium is brought about by the excess of exports over imports in one country and the excess of imports over exports in the other. It is only international goods which can be exported and imported. It is, therefore, their price levels alone which are equalised. Differences in price levels of domestic goods may exist and yet they will continue to exist because there is no force in operation which can equalise them.

It is sometimes suggested that when prices of international goods rise (or fall) in a country, prices of domestic good also rise (or fall) in sympathy. Hence, it is said, when price levels of international goods are equal in two countries, general price levels must also be equal. But the argument is not sound. No doubt, there is generally a sympathetic change in the prices of domestic goods when there is a change in the price level of international goods. Yet there is no reason to believe that the change in the prices of domestic goods must be *as much as* the change in the prices of international goods. Hence the price levels, to which purchasing power parity refers, can be those of international goods only.

Exchange rate does not equalise price levels of international goods. Modified as above, the theory comes to be that such an exchange rate will prevail between the two currencies as equalises price levels of international goods in the two countries. The theory abstracts from

costs of transportation as well as restrictions. If we assume that there are no customs duties, nor any charges of packing, transport, banking, insurance, etc., there is little in the theory which is objectionable. In such an imaginary world, not only price levels of international goods, but also price of each individual international commodity, will be equal everywhere.

As things are, there are costs of transportation to be incurred. Prices of exports of country *A* are lower in country *A* and higher in country *B*. Similarly prices of imports of country *A* are higher in country *A* than in country *B*. Thus one set of international goods (exports) have a lower price level in country *A* and another set of these goods (imports) have a higher price level. The quantities and nature of commodities in the two sets are different. There is, therefore, no reason to believe that the two differences will cancel out.

Thus price levels (even of international goods) in the two countries may be, and generally are, different. The difference arises on account of costs of transportation. Let P_a and P_b be, respectively, the price levels in countries *A* and *B*, and let R be the rate of exchange. We have reached the following conclusions:

If there are no costs of transportation, $P_a = P_b \times R$

With costs of transportation, $P_a = P_b \times R \times k$,

where k represents difference in the two price levels on account of costs of transportation.

Purchasing power parity and changes in price levels. It is sometimes suggested that the purchasing power parity theory does not apply to price levels at any point of time, but to *changes* in the price levels. To quote Gustav Cassel, "it is only when we know the exchange rate which represents a certain equilibrium that we can calculate the rate which represents the same equilibrium at an altered value of the monetary units of the two countries."⁴ For instance, suppose in a position of equilibrium rate of exchange between *A*-money and *B*-money is 1 : 5. Further suppose that price level doubles in country *B* as a result of an increase in the media of exchange but price level in country *A* remains the same. It means that internal value of *B*-money has been halved, so its external value will also be halved, i.e. rate of exchange will become 1 : 10. Similarly if price level in country *A* doubles and the same in country *B* trebles, rate of exchange will be 2 : 15 or 1 : 7½.⁵

Even this modification of the theory is unhelpful. The above effects of changes in price levels would materialise exactly as shown, only if difference in the price levels on account of costs of transporta-

⁴ *Money And Foreign Exchange After 1914*, p. 14.

⁵ The formula for calculation is: $\frac{R'}{R} = \frac{P_a'}{P_a} \div \frac{P_b'}{P_b}$.

tion remains the same. But, in the first place, price levels change unequally. Secondly, when price levels change, prices of individual commodities change unequally. There is, consequently, a change in the volumes and contents of exports and imports. Differences due to costs of transportation cannot remain the same.

The above argument can be stated more clearly with the help of algebraic symbols. Let, in the initial position of equilibrium, price levels in countries *A* and *B* be, respectively, P_a and P_b , and R the exchange rate. Let at a later date, P_a' and P_b' be the price levels and R' the rate of exchange. Let k and k' represent differences due to costs of transportation. Now, purchasing power parity theory as applied to changes in price levels would conclude that,

$$R' \div R = \frac{P_a'}{P_a} \div \frac{P_b'}{P_b}$$

As we already know, $P_a = P_b \times R \times k$

and, $P_a' = P_b' \times R' \times k'$

$$\therefore R' \div R = \frac{P_a'}{P_a} \div \left\{ \frac{P_b'}{P_b} \times \frac{k'}{k} \right\}$$

Obviously, then, the conclusion of the purchasing power parity theory holds only if k and k' are equal. And we have no reason to assume that they will be equal. On the other hand, they are most likely to be unequal on account of changes in the volumes and contents of exports and imports. It would be very rarely indeed that they are equal.

Conclusion. Purchasing power parity theory brings out one important fact, namely that price levels of any two countries which have trading relations are interconnected. Suppose exchange rate between two currencies is fixed. Then if one country expands its currency so that prices rise high, price level of the other country will also tend to rise. When exchange rate is free, large issues of currency, and the consequent rise in the price level in one country, will change either the exchange rate or the price level or both in the other country. It is generally changes both in the exchange rate and in the foreign price level which bring about the necessary adjustment.

The theory falters when it endeavours to establish a mathematically precise relation between price levels on the one hand, and the exchange rate on the other. Existence of costs of transportation and customs duties are factors which make existence of such a precise relation impossible. In fact, it is possible to keep the price level of a country very much isolated from the price level in the outside world. The validity of this statement becomes apparent when we remember that there is no relation, whatsoever, of the price level of a country with

that of the outside world if it closes its economy to trade with other countries.

Further Readings :

1. Halm : *Monetary Theory*, Chs. 12 and 13.
2. Keynes : *Tract on Monetary Reform*, Ch. 3
3. Haberler : *International Trade*, Chs. 2-4.
4. Krause : *The International Economy*, Ch. 4.

Role of the State

CHAPTER XXXIX

OBJECTIVES OF MONETARY POLICY

DEVELOPMENT OF THOUGHT

Views of economic thinkers regarding objectives of monetary policy have been undergoing a gradual transition during the 20th century. With the advance of time, more and more objectives have been suggested, and also there have been shifts in the order of priority. The position today is that a long list of objectives is presented and it is held that it is not possible to be dogmatic in respect of priorities. A brief history of the development of thought regarding objectives of economic policy should be instructive.

Stable exchanges. Before 1914, maintenance of exchange stability was considered the sole objective of monetary policy. Arguments given for the necessity of stability in the exchange rate were the following:

1. A falling exchange rate will push up exports and reduce imports. It is, however, not certain that exchange earnings will be increasing. For all depends on elasticities of demand for and supply of imports and exports. But even if *net* exchange earnings go on increasing, of what use will that be to the people? After all, exchange earnings are meant for spending and not for needlessly piling upon. And piling up foreign exchange is all the more stupid if it is procured at an ever-increasing price. Moreover, starting from a point of equilibrium, every depreciation in the external value of currency will lead to inflation with all its attendant evils.

Quite similarly, there is no point in adopting a policy of continuously rising exchange rate. That will discourage exports and encourage imports, thus causing difficulties of balance of payments. And continuous appreciation in exchange rate will cause depression which will continuously deepen, so that incomes, employment, and prices will fall progressively. The consequences are so dreadful that no sane person will advocate adoption of a policy of this type.

Fluctuations in exchange rate are more easily perceived than changes in the price level. Consequently, much smaller changes in exchange rate give rise to speculative activity and shake confidence.

Hence even small changes in exchange rate substantially affect trade and financial relations with other countries. International movements of goods as well as of capital are adversely hit. It is, therefore, essential that exchange rate does not fluctuate.

2. Many countries have had very bitter experiences of hyper-inflation. Such inflations were accompanied by steep falls in the exchange value of their currencies. Every fall in the exchange rate is;

therefore, apt to be considered a precursor of inflation and is apt to be viewed with alarm. In other words, it is likely to shake confidence. For this reason also stability in exchange rate is essential.

3. Many countries depend for their food and raw materials on the outside world. And there is hardly any country which does not depend for one essential requirement or the other on foreign countries. A smooth flow of such goods can be ensured only with stability in exchange rates.

4. Severe fluctuations in exchange rate cause internal instability. Violent changes in exports and imports cause wide fluctuations in internal prices and thus give rise to intense dislocation in the economy.

Stable price level. After 1914, as a result of the views expressed by Hawtrey and Keynes, stress shifted to stability of internal price level. The following arguments were advanced in favour of this objective of monetary policy:

1. A constantly falling price level reduces profits and leads to depression. Unemployment becomes rampant and increases every day. Incomes fall and the very purpose of economic policy is defeated. A constantly rising price level, on the other hand, discriminates against fixed incomes and wage earners, whose real incomes fall progressively. There can be no justification for a policy which continuously discriminates against a class of people who so much need to be helped out of the quagmire into which evils of the industrial system have thrown them. Lastly, fluctuating prices increase risks of trade and production and keep less venturesome people away from business. Even those, who remain in the field, operate their business at a lower scale than they otherwise would. Thus production and trade suffer a set back.

2. Positively much can be said in favour of a stable price level. It reduces risks of production and trade and promotes confidence in the economy. Capital is attracted from outside. At home, hoards dwindle to the minimum, and production, employment, and incomes increase. Moreover, stable prices do not discriminate against any class—neither against wage earners, rentiers and creditors, nor against producers and debtors.

3. That domestic economic requirements should be given precedence over requirements of foreign trade, is easy to establish. In the case of almost every country, internal trade is of much larger dimension than foreign trade. Internal trade is, therefore, of much greater significance. But the more important point is that large incomes are the fundamental objective of all economic policy. It cannot be any different with monetary policy. Hence monetary policy must keep this as its direct objective. Even international trade will deserve to be promoted only if it increases incomes at home.

Stable exchange promotes foreign trade, while stability in the price level promotes production and trade within the country. As

domestic production and trade are of much greater importance than foreign trade, stability in domestic price level must be given a higher priority than stability in exchange rate.

Full Employment. The Great Depression of early 'thirties was of unprecedented severity. It opened the eyes of economists to the multifarious evils of unemployment. Not only does unemployment cause loss of incomes, but also the poorer sections lose their very bread. More than that, it causes social degradation. For there can be no worse source of degradation than the feeling of "being not wanted."

Consequently full employment came to be regarded as the most important objective of economic policy and, hence, of monetary policy. As a result of many writings and discussions the following point of view finally crystallised.

Stabilisation of prices *at any level* is not helpful. If the country has been through a period of depression, stabilisation of prices would freeze incomes and employment at a low level. Similarly if there has been a steep inflation, stabilisation of prices at a high level may not restore confidence and may cause hardship and inconvenience. After a depression prices must be raised to ensure full employment, and after a boom they must be brought down to effectively curb inflation. Thus the aim of monetary policy, as of all economic policy, should be *stability with full employment*. In a period of depression, it becomes the duty of the monetary authority to adopt measures which step up investment and consumption, so that prices pick up and recovery starts. Similarly in a period of boom investment and consumption must be reduced, so that inflationary tendencies are curbed. Such a policy has come to be called *anticyclical policy*.

Economic development. With the Second World War has dawned the realisation that existence of underdeveloped areas is the main cause of international friction. Moreover, many countries have recently attained freedom and their nascent governments are making efforts for the economic uplift of their countries. Further, war devastated many countries and caused widespread ruin. These countries had to reconstruct their economies. As a result of these factors, economic development of these countries has become an avowed aim of their governments. Thus economic development has come to the forefront in the objectives of monetary policy.

The monetary authority must see to it that its policy subserves the requirements of economic development. For that purpose, some prices may have to be raised, others lowered. A slowly rising price level may sometimes be helpful. Similarly sometimes stable exchange rate and sometimes depreciation in the exchange rate may be the need of the hour. Hence monetary authority must adjust its policy to changing needs of the primary objective, namely economic development.

Latest view. The latest view has been expressed by the Radcliff Committee. They are of the opinion that it is not possible to be dog-

matic in drawing priorities in respect of objectives of monetary policy. All that can be done is to enumerate the various possible objectives; "but the degree of priority which is to be attached to any one in relation to the others varies from time to time with changes in economic circumstances."¹

MAJOR OBJECTIVES OF MONETARY POLICY

Employment. A high and stable level of employment is considered a major objective of monetary policy. As a result of the Great Depression during the 'thirties, a very significant proportion of the working population was unemployed in most of the countries. 10% unemployment became the order of the day. Even the best efforts of the governments could not reduce it appreciably. The failure of the governments to achieve any substantial results produced an attitude of pessimism and it came to be widely held that 8% should be considered normal level of unemployment.

During and after the Second World War, many countries have had a happier experience. Unemployment has fallen to a very low level in many countries—in some countries as low as 3%. In fact the level of national and international demand for some manufactures has been so high that these industries have been expanding rapidly and yet could not keep pace with the demand. Some of them have been much handicapped by shortage of specific labour.

All this has enlivened new hopes in the governments and the peoples. It has now come to be widely believed that with appropriate monetary policies (and other measures) unemployment can be kept very low indeed. People have started entertaining high expectations in this respect. If governments are to live up to the expectations of their people—as all popular governments should—then monetary authorities must ensure a high level of employment. And the governments have acquired a new faith in their capacity to achieve this objective.

Economic growth. Governments are no more just police entities; now they invariably assume the role of welfare entities. Moreover, it is not enough that a government should ensure against frequent and violent disturbances, it is essential that it plays an active role in fostering economic growth of the country. It is a major responsibility of a government to create conditions which help to raise living standards of the people.

Monetary policy must be so engineered that appropriate incentives are provided for an optimum rate of economic growth. In other words, one more major objective of economic policy is to help to bring about a rate of economic growth which is the highest possible with tolerable suffering.

Internal stability. Not only has the monetary authority to foster economic growth, it must also ensure that growth comes with stability. Depressions and inflations are sworn enemies of economic growth. De-

pressions adversely hit production and employment and thus reverse—or, at least, slow down—the process of growth. Inflation ultimately lead to flight of capital and breakdown of the economic system. They eat away more than they create. It is thus one of the important responsibilities of the monetary authority to take timely measures against the appearance of these ugly phenomena.

Economic development usually tends to be accompanied by a gradual rise in the price level, which adversely hits the labouring classes and fixed incomists. And if the rise in prices is a continuous process, cumulative effect of it proves very severe for them. There is, in that case, a hanging danger of social disruption. Moreover, if the country has taken to the path of planned development, a rise in prices upsets all calculations. It becomes difficult to achieve targets of investment and production, and faith of the people in the efficacy of planning may, consequently, be shaken.

Even otherwise, rises and falls in the price level are very painful maladies, the former for its undesirable distributive effects and the latter for its adverse effects on employment. Similarly fluctuating prices interfere with a healthy, and smooth working of the economy.

For all these reasons, internal stability is an important objective of monetary policy. It is doubly so because variations in money supply (or their absence) are a major cause of changes in the price level. With appropriate adjustments in the money supply, the monetary authority of the country can generally successfully maintain stability in the price level.

External stability. Every country, which is a member of the International Monetary Fund, is committed to keeping its exchange rate fixed at its declared parity. It can be changed only to correct a fundamental disequilibrium. In 1949 England, India, and many other countries (of the sterling area) devalued their currencies with a view to bringing about adjustments in their balance of payments. Their experience has shown that devaluation fails to bring about an enduring adjustment, because its power to perform this function fails as soon as internal value of the currency becomes equal to its external value.

Exchange rate is not a toy to be played with. Disturbances in exchange rate unfavourably influence trade and capital movements. And if disturbances are violent, even internal prices, production, and employment are adversely hit. Stability in exchange rate is, therefore, a major objective of monetary policy.

Balance of payments. The attitude, which monetary authority should adopt regarding the balance of payments, depends on international obligations of the country as well as requirements of its internal situation. Different policies will be appropriate under different circumstances. Let us examine a few cases.

(a) Suppose the country has contracted external debt in the past, so that it has to make interest payments and, also to make arrangements

for repayment of the debt. In such a case, monetary policy must aim at creating a sizable margin in the balance of payments, so that payments which fall due on account of debts may be easily met.

(b) Suppose the country is economically advanced and considers it an obligation to help underdeveloped countries in their effort for economic development. Once again monetary policy must aim at creating favourable balance of payments, so that the balance may be loaned or gifted away to underdeveloped countries.

(c) Suppose the country's reserves of foreign exchange are not adequate to give confidence that emergencies can be met. Here also monetary policy must attempt to create a favourable balance, so that reserves are strengthened.

(d) Suppose the country's domestic requirements of capital are large and it has adequate reserves of foreign exchange to meet emergencies. The monetary authority must, then, realise that a favourable balance of payments will only increase foreign exchange reserves, and thus divert resources to an unproductive or less productive use.

(e) If the country has been having an adverse balance of payments which has strained the foreign exchange reserves, then the balance of payments must be corrected. For, though a continual favourable balance of payments is bad, a continual unfavourable balance of payments is very bad.

DECISION OF PRIORITIES

Conflict between objectives. The objectives of monetary policy enumerated above are not always mutually consistent: there are serious possibilities of conflict between them. A few examples are worth citing.

Suppose the price level rises or falls in those countries with which we have trade relations. If our monetary authority decides to keep the price level stable, it must let its exchange rate change bring about the necessary adjustment. On the other hand, if the exchange rate is kept stable, internal price level will change in adjustment to foreign prices. It is a simple lesson of the theory of purchasing power parity that, when foreign price levels are changing, we can either keep price level stable or exchange rate stable. A choice has to be made between the two.

Suppose with the aim of attracting capital from abroad, domestic rates of interest are raised. More capital may be imported, but higher rates of interest may adversely affect investment at home. Moreover, the government will have to raise new loans at higher rates and, consequently, cost of servicing the public debt will rise. The monetary authority has to decide which of these various effects is more important and thence decide whether to raise interest rates or not.

Now suppose that unemployment at home is high and the monetary authority is concerned to reduce it. One method is to raise internal

prices. In that case employment and stability in price level come into conflict. Another method is to push up exports by devaluation. Here employment and exchange stability conflict. Once again a choice becomes necessary.

Criterion of judgement. Though the different objectives of monetary policy often come into conflict with one another, yet often the decision regarding the policy to be adopted is not difficult to make. For instance, when slump has overtaken the country as well as the world at large, it is an obvious duty of the monetary authority to step up effective demand. Efforts must be made to effect a rise in the price level. This may create some exchange difficulty and yet the decision can hardly be challenged. Similarly if there is a large unemployment in the export industries, devaluation may happen to be the only course.

Radcliff Committee have suggested a criterion for arriving at decisions. This criterion is in the *orderly life of the society*. The monetary authority must always make efforts to control those tendencies which may disrupt the fabric of the society. To none of these objectives should it attach an immoderate importance. Priorities must be decided in the context of the economic situation and social circumstances in which monetary policy has to operate. In different situations, different importance has to be attached to different objectives. "The choice between conflicting alternatives is a continuous process, to be lived through all the time."²

Further Readings :

1. Crowther : *An Outline of Money*, Ch. 6.
2. Chandler : *An Introduction to Money*, Ch. 8.
3. Radcliff Committee Report, Ch. II.

CHAPTER XXXX

PUBLIC FINANCE

INTRODUCTORY

Meaning of the term. According to Armitage Smith, public finance is an "investigation into the nature and principles of state expenditure and state revenue." Dalton defines it as a science "concerned with the income and expenditure of public authorities and with the adjustment of the one to the other." He further clarifies that by public authorities is meant all kinds of government, from parish council or municipal committee to national (or even international) government. Though Smith uses the word "state" and Dalton uses the phrase "public authorities", yet the two definitions come to the same thing. For, as Ursula Hicks has well observed, the term state is a convenient shorthand covering both major and minor governing bodies.

Professor Bastable has suggested that the study of public finance should cover the principles of public finance as well as matters of financial administration and control. Of course a comprehensive study of the subject must deal with all the three aspects, but as students of economic science we need not concern ourselves with matters of control and administration. For our purpose, therefore, a study of public finance means a study of the general principles which underlie financial activities of public authorities.

There are four broad sources of revenue of a government—commercial undertakings, taxes, loans and printing of notes. Loans and taxes may be raised in the form of goods and services. Similarly expenditure may take the form of using commodities and services, thus secured. But such things rarely happen today. Almost the entire revenue of a modern state arises in the form of money. Hence in the context of present-day conditions, a study of public finance is veritably a study of the financial activities of public authorities. It concerns itself how money-revenue of the public authorities is raised and how it is spent.

Increasing importance of the subject. Activities of the state have gone on increasing ever since organised governments came into existence. From a protector of the citizen against internal disorder and external aggression, the state has become today an organisation to look after and promote welfare of the community. In its earliest stages its only duty was policing. Today it spends on all those items which conduce to economic welfare of the community but for which individuals are either unwilling or unable to spend. Individuals, as a rule, are not prepared to spend on lighthouses, museums, roads, etc. And few have resources enough to provide themselves with defence, canals, or railways. The state has also undertaken to provide what are called social and economic overheads like education and health facilities, cheap power and the like.

Conversion of a police state into a welfare state involves expansion of its activities, and of expenditure as well as revenue. With extension in the range of activities of public authorities, public finance has become a subject of great importance.

PRIVATE FINANCE AND PUBLIC FINANCE

Similarities. Public finance has many features in common with private finance. The financial activities of a public authority, as of an individual, consist in raising a revenue and then spending it. An individual's income in any period may be more or less than his expenditure, i.e. he may have saved or dissaved in that period. Quite similarly public revenue in any period may exceed or fall short of expenditure, i.e. the public authority may have a surplus budget or a deficit budget. Lastly, every individual endeavours to derive maximum advantage from his income: likewise a public authority is also expected to plan the disposal of its revenue in such a manner as yields maximum benefit to the community. Thus both aim at maximising utility.

Dissimilarities. There are however, many points of difference between public finance and private finance. Though some of these differences are of rather minor significance, others are of major importance and impart to public finance a distinct character.

The income of an individual (apart from gifts and charities, if any) arises from the sale of service—personal service or service of his property. The state is also a seller of goods and services, but these constitute a minor source of its revenue. Its main source of revenue in ordinary times is taxes. Taxes have no counterpart in the incomes of individuals. Similarly a government is in a position to augment its resources by printing notes, i.e. by deficit financing¹. The fact, that taxes and deficit finance are sources of revenue to public authorities but not to individuals, gives rise to important differences.

An individual is interested in maximising his own income only. A wage earner, for instance, is interested in bargaining for the highest wage rate, unconcerned about how it affects the employer. A finance minister, on the other hand, must consider the effect on the people of the methods by which he raises revenue. Productive activity, taxes, borrowing from the people, and deficit finance are the various methods available to him. He cannot be just interested in raising a given revenue, anyhow. He must gauge the comparative effects of the various methods of raising the revenue and choose those methods which cause the least burden on the public.

An individual can augment his spendable resources from his savings

¹ The process takes the form of borrowing from the Central Bank and the Central Bank issues notes against government securities thus secured. In other words, the excess of government expenditure over its revenue induces printing of notes indirectly, rather than directly.

It may be noted that the term "deficit finance" is being used here in a narrow sense, because spending previously accumulated funds is also deficit financing.

or by borrowing. Both these methods are open to a public authority. But the latter can borrow from inside the country or from outside ; it can raise an internal or an external loan. An individual, on the other hand, cannot borrow from himself. In his case an internal loan has no meaning. Only external borrowing is possible. This is, however, a minor difference, because the basic fact of loans being a source of revenue is common to both.

An individual so distributes his income among the various items of expenditure that he gets maximum utility. The objective of a public authority is also maximum utility but the relevant concept in its case is social utility. The individual has to judge things for himself; the finance minister has to estimate the utility of expenditure to others. Thus an individual has to judge things by introspection: his criterion of judgement is subjective. The finance minister, on the other hand, has to evolve some objective standard of measuring utility to others, and such a standard is difficult to evolve. Moreover, an individual pursues the course of maximising utility in self-interest and he instinctively arrives at the arrangement of maximum satisfaction. The finance minister takes it as a duty to evolve an arrangement of maximum social benefit and this he does by a consciously calculated policy. Evidently, this point of difference is of fundamental importance.

An individual prefers present satisfactions to future satisfactions. The extent to which he thus discounts the future depends on his habits, his expectations, and the like. But every individual does put some premium on ready delivery in comparison to a promise of future delivery. A state is a continuous entity. Individuals die ; a people do not. A finance minister, therefore, does not, or should not, discount the future. He has to juxtapose future requirements with present requirements on an equal level to decide how he would dispose of the state revenue. This is a difference in respect of ordering the scale of preference. But it is not one of those differences which would justify a separate theory of public finance.

An individual spends his income on those items which have greatest utility for him. Similarly a public authority has to gauge the direct social utility of the various items of expenditure : but, in addition, it must compare the effects on incomes and employment. Not only the usefulness of the goods and services provided but also the effects produced on incomes and employment, will determine the distribution of expenditure of a public authority.

The above point gives rise to the most fundamental difference between private finance and public finance. The attitude of an individual and a public authority towards "balancing the budget" have of necessity to be different. Discretion demands that an individual saves a part of his income for rainy days and old age, as well as to increase his resources and enhance his income. A good budget for an individual is a surplus budget. The very least that is expected of him is that he keeps his expenditure within the limits of his income. The attitude of a public authority in this respect cannot be a fixed, unchanging one.

Whether it is advisable for it to have a balanced, or a surplus, or a deficit budget, depends on the requirements of the economic situation obtaining in the country. For instance, as we shall see presently, the appropriate policy will be surplus budgets in periods of depression and deficit budgets in periods of boom. Similarly deficit budgets may be necessary if the country has adopted the course of planned economic development.

THE BUDGET

What is a budget. A budget is a statement of accounts giving estimates of revenue and expenditure for a period. Budgets of public authorities are drawn for a financial year. Financial year of India starts on 1st. April and ends on 31st. March in the following calendar year.² A government budget is presented by the finance minister to the legislature for its approval some time before the start of the financial year.

A budget gives sources of revenue on the one hand, and heads of expenditure on the other, showing respective sums against each. In India, as in so many other countries, a budget provides figures for three financial years—the previous year, the current year, and the following year. For instance, the budget presented in February 1956 gave figures in respect of April 1954-March 1955; April 1955-March 1956; and April 1956-March 1957. In respect of the previous year figures for actual revenue and expenditure are provided. In respect of the following year, only estimates, known as budget estimates, are given. In respect of the current year, revised estimate—based on the actual figures of ten months which have passed and estimates for the remaining two months—are given. Revised estimates are, evidently, nearer approximations to actuals than budget estimates.

A budget of the Government of India follows the pattern of Swedish budget. It is divided into current budget and capital budget. In the former, revenue from taxes and income from commercial undertakings is shown, and such items of expenditure are included which do not result in any income-yielding assets. In the capital budget only those heads of expenditure are included which give rise to income-yielding assets. Repayment of loans are also shown here because these reduce obligations and release revenue which would otherwise go to pay interest on them. On the revenue side of the capital budget are shown public debts which are proposed to be floated or contracted during the year. The deficit in the two parts of the budget is met out of balances, or by borrowing from the Central Bank.

Importance of budget. One purpose of preparing the budget and presenting it to the legislature is to regulate and regularise expenditure and to properly administer it. It is a part of planned administration. It would, however, be a mistake to consider a budget as just a cold state-

2 British financial year is the same as ours. That of U.S.A. starts on 1st July and ends on 30th June in the following year. France treats calendar year as the financial year.

ment of account or a mere method of control over administration. Every budget has important economic implications. Budgeting is, therefore, an important instrument of economic policy.

It is now customary in countries like India and England that presentation of the budget is accompanied by a statement purporting to give a broad survey of the economic situation obtaining in the country. Such a statement is considered necessary to enable the legislators to judge the merits of the budget. It is with reference to the prevalent conditions that various provisions of the budget are evaluated. Now we propose to study how opinions have changed regarding the appropriate criteria for judging a budget, *i.e.* for evaluating the public finance policy.

CLASSICAL VIEW OF PUBLIC FINANCE

Adam Smith's canons of taxation. Classical economists recommended that government should interfere the least in the run of economic activity. They assigned to the state the role of providing only the articles of communal consumption. For instance, Adam Smith suggested that the state should undertake to provide external defence, internal order, and services like those of roads and canals, which are of high value to the community but which cannot be profitable undertakings for private producers. The maxim of minimum interference by the state led the classical economist to enunciate three principles. First, the revenue raised should be just adequate to meet the requisite public expenditure, *i.e.*, public budgets should be balanced. Second, when the state has decided upon the kind and extent of services to be provided, it should ensure that they are produced at least costs; *i.e.* wastes must be avoided. Third, the levying and collection of taxes should conform to certain canons. Adam Smith mentioned the following four canons of taxation.³

1. "The subjects of every state ought to contribute towards the support of the government, as nearly as possible, in proportion to their respective abilities; that is in proportion to the revenues which they respectively enjoy under the protection of the state."

This has been called the canon of equality or equity. This canon demands, in the first place, that the tax system should be so conceived that all kinds of earnings—wages, rents, as well as profits—bear their respective shares of burden. Secondly, as the rich enjoy a greater protection of the state, they should bear a greater tax-burden. But how much more? There is a difference of opinion among the economists in this respect. Some of them hold that the very use of the word "proportion" in the statement of the canon indicates that taxes ought to be proportional to incomes. Others point out that Adam Smith himself has observed in the *Wealth of Nations* that "the rich should contribute to the public expence, not only in proportion to their revenue, but something more than in that proportion."⁴ Such people, therefore, assert that the canon of equity demands that the *rate of taxation* should

3 "*Wealth of Nations*", Cannan edition, pp. 777-9.

4 *Ibid.*, p. 794.

increase as income rises, i.e. taxation should be progressive. Yet even the protagonists of this view cannot agree among themselves regarding *how much* progressive should taxation be. Different people recommend different degrees of steepness with which the *tax rate* should rise as income increases.

2. "The tax which each individual is bound to pay ought to be certain and not arbitrary. The time of payment, the manner of payment, the quantity to be paid, ought all to be clear and plain to the contributor, and to every other person."

This is the canon of certainty. Justification for this canon lies in Smith's belief that uncertainty encourages corruption. Smith attaches a great importance to this canon. He goes to the extent of asserting that a very considerable degree of inequality is not so great an evil as a very small degree of uncertainty.

3. "Every tax ought to be levied at the time, or in the manner, in which it is most likely to be convenient for the contributor to pay it."

This is called the canon of convenience. Smith takes the example of taxes on luxuries and points out that these taxes generally fall on the consumer and he pays them in a manner that is very convenient for him. For he purchases such goods, and thus pays such taxes, when he has wherewithal enough.

4. "Every tax ought to be so contrived as both to take out and to keep out of the pockets of the people as little as possible, over and above what it brings into the public treasury of the state."

This is the canon of economy. Here Smith mentions four factors. First, tax system must be so contrived that the ratio of cost of collection to revenue from taxation is low. Secondly, taxes must be such as do not discourage industry. For otherwise taxation will be harming its own source. Thirdly, if the cost of collection is heavy, taxes become heavy and encourage evasion. And, lastly, frequent visits of tax-officials expose people to unnecessary trouble and oppression.

Of these the second is the most important. We must take into account not only the loss in terms of the amount of money paid by the people, the discouragement which taxation causes to industry is also important, in fact much more important. As Adam Smith does take such a loss into account, Mrs. Hicks has suggested that in the case of taxes on commodities, the canon of economy should mean that the *net* loss of consumers' surplus—i.e. the difference between the loss of consumers' surplus and revenue received by the government—should be the minimum. We have already discussed this question in chapter VII.

Now, in comment on these canons, we may point out that the second and the third relate to administrative matters. The economist is interested in the canon of equity as well as of economy. System

of taxation must be such that tax burden is equitably distributed among all sections of the community and, at the same time, it does not cause discouragement to industry nor great damage to welfare of the consumers. We must, however, note that the canon of equity does not carry an unambiguous meaning. We are not sure whether it indicates proportional taxation or progressive taxation. And even if we accept that it indicates progressive taxation, we cannot agree on how steeply progressive should taxation be. We must also note that the basis of equity is, at once, both ethical and economic. It is ethical because it is based on some conception of social justice. And it is economic because those who earn higher incomes under the protection of the state are asked to contribute more towards that protection. Lastly, we may note that the principle of equity may conflict with the principle of economy. Equity demands that taxation should be steeply progressive. But when rich people are taxed heavily, capital formation may suffer and industry may be injured grievously.

Other canons. Later writers have suggested some more canons of taxation. These are canons of simplicity, productivity, and elasticity. Canon of simplicity implies that individual taxes should be easy to calculate and tax system as a whole ought to be easy to comprehend. Canon of productivity means that every tax should yield a large revenue. In other words, a few very productive taxes should be preferred to many taxes with small yields. Lastly, canon of elasticity implies that tax system should be so contrived that the yield increases as population and prosperity increase and also as the needs of the government increase.

A little reflexion will show that nothing new of fundamental importance is indicated in these canons. Canon of simplicity is implied in Smith's canons of certainty (every man knowing how much he is to pay) and of economy (few taxes). Similarly the principle of elasticity is contained in the principle of productivity and the principle of productivity is implied in Smith's canon of economy. Hence when all canons have been examined and weighed, and when requirements of administrative efficiency and convenience are left over for the political scientist, we are left with two important canons of economic significance. These are the canons of equity and economy. Of these, the question of equity or justice needs further examination.

Three theories regarding equity. In the name of equity and justice, the following three bases have been suggested for levying taxes.

1. *Benefit principle.* Protagonists of this principle hold that every person should pay taxes in accordance with the benefit which he derives from services rendered by the state. They assert that equity demands that those, who benefit more from the existence and activities of the state, should pay more taxes, and *vice versa*. This principle is the basis of quite a few taxes in every country. For instance, taxes on petrol, on vehicles, and on freights and fares, are paid by those who use roads. Similarly tolls on bridges are charged from those who

use such bridges. Judicial stamps are paid for by the litigants and postal stamps by those who do correspondence.

Though this principle is followed in the case of some taxes, it cannot form the general basis of taxation. A number of objections have been raised: three of them are really important. First, there are a number of services rendered by the state of which the benefit to individuals cannot be assessed. Defence is an important example of the type. Secondly, even where the benefit to individuals can be estimated and they are charged in proportion to their respective share of benefit, taxes do not remain taxes: they become prices. The state ceases to be a welfare entity, it becomes one giant business concern. Lastly, the benefit principle leads to some very absurd conclusions. For instance, on this basis the pensioners must pay back their entire pensions. Similarly, as a welfare state spends more for the benefit of the poor, they should be made to pay more taxes. It is self-evident that if "justice" leads to more burden on the poor and less on the rich, it ceases to be a justice of any description.

2. *Cost of service principle.* This principle is akin to the above principle. It states that every individual should pay taxes according to the cost of services rendered to him. The only difference of this principle from the benefit principle is that here it is explicitly made clear that the state should not make any profit on services rendered.

As the state is to charge for all services rendered by it, the question of profit does not arise. Viewed thus, this principle is little different from the benefit principle. Hence all the objections raised against the benefit principle are valid in the case of this principle also.

3. *Principle of ability to pay.* This is the soundest and the most widely accepted basis of tax-structure. This principle states that every individual should contribute to the expenses of the state in accordance with his ability to pay. Broadly speaking, ability to pay means economic well-being. Those who are equally prosperous should pay equal amounts in taxes. And more prosperous should pay larger amounts as taxes than those who are less prosperous.

But what is the objective index of prosperity. Some people suggest that wealth or property is a dependable index of prosperity. But people may have large incomes and yet no property. Such individuals would not have to pay any taxes and that cannot be considered just. For this reason others suggest income as the index of prosperity. This is a good index, but an important difficulty arises even here. Individuals, with equal incomes but with unequal families, cannot be considered to have equal ability to pay. Many economists have suggested expenditure as the basis of taxation. This basis is good because it penalises prodigality. But the main difficulty remains unsolved: people with large families have to spend more and they will be unduly penalised. In recent times opinion seems to have crystallised on the following points:

- (a) Size of annual income should be the main basis for judging ability to pay.

- (b) Rebates should be permitted for large families and on savings.
- (c) A minimum of income should not be taxable.
- (d) Income from property should be taxed at higher rates than income from work.
- (e) Expenditure which can easily be considered excessive should be taxed heavily.
- (f) Incomes, which are in the nature of surpluses or windfalls, should also be taxed heavily.

Even after having decided that ability to pay should be the basis of taxation and that income is the principal index of ability to pay, one important question remains. Shall we have proportional taxation or progressive taxation. As we have already observed, Adam Smith can be quoted in support of both these points of view. Later economists have advanced two views. First, every individual should make equal sacrifice. As the marginal utility of money to the rich is lower than the same to the poor, a larger—more than proportionate—payment by the rich will mean equal sacrifice. The conclusion is that taxation should be progressive. Second, tax system should be so contrived that it causes least burden on the community. As the upper slabs of incomes of the rich people carry less utility, these slabs must be taxed heavily. The lower slabs of incomes should be taxed at lower rates. Once again, progressive taxation is indicated.

There is a serious objection against the principle of equal sacrifice as well as the principle of minimum aggregate sacrifice. Both these principles are arrived at with the help of inter-personal comparisons of utility. Against the principle of minimum aggregate sacrifice it is said, in addition, that it will affect savings very adversely.

In spite of these objections the broad conclusion is accepted. Progressive taxation is the order of the day. It is considered as an appropriate weapon for reducing inequalities of incomes and wealth. It conforms, more than proportional taxation, to the canon of equity. Income tax, wealth tax, property tax, expenditure tax, are all graduated. Even in excises, luxuries are generally preferred to necessities; articles of consumption of the rich to articles of consumption of the poor.

Conclusions regarding classical view. The suggestion of additional canons and the controversy regarding the three theories of taxation did not mark any significant deviation from, nor any advance on the essentials of the classical view. The attitude towards expenditure and taxation remained basically the same. Expenditure must be incurred on articles of communal consumption only. Waste ought to be reduced to the minimum. And tax-burden should be distributed as equitably as possible. The extent to which a public authority was to stretch its activities was determined by what articles of communal consumption were considered advisable to provide. Thus collective consumption

was the sheet-anchor of public finance. It was the principal determinant of the economic activities of the state.

It may be said that not only provision of communal consumption but also reduction in inequalities indicated public finance policy, better known as fiscal policy. This is true to some extent, because fiscal policy did pursue both these objectives. But provision of communal consumption was the primary objective: reduction of inequalities was incidental to it. It *was not* suggested that the extent of communal consumption and the extent to which inequalities were to be reduced should be simultaneously decided, and then the fiscal policy should be framed accordingly. Classical writings suggested that the amount of tax revenue should be decided with reference to provision of communal consumption. Then, as the requisite revenue had to be raised somehow, it was preferable to distribute the burden equitably rather than inequitably.

There was nevertheless, one front on which fiscal policy was to be decided on a basis other than provision of communal consumption. That front was the levying of import and export taxes. Mercantilists recommended import duties for creating a favourable balance of trade and thus promoting prosperity of the country.⁵ Adam Smith stood for free trade, because he thought that restrictions on imports and exports divert capital into less profitable channels. List advanced infant industry argument and Mill accepted it. And this argument is nothing but a plea for using fiscal policy for development of domestic industry. Thus fiscal policy in respect of exports and imports was considered an instrument for promoting development. Notwithstanding this, we may repeat that the classical economists considered provision of articles of communal consumption as the primary aim of financial activities of the state.

MODERN VIEW OF PUBLIC FINANCE

Keynesian approach. The attitude of economists and governments regarding the role which public finance can play in the economic life of the people, has undergone a vital change during the last thirty years. This change in attitude is the result of Keynes' "General Theory of Employment, Interest and Money." He has shown that national income and employment result from consumption expenditure and investment. Money incomes can always be increased by increasing expenditure. So long as there are unemployed resources, every increase in money income will be accompanied by an increase in employment as well as real income. In case there is full employment, an increase in expenditure will increase money incomes only: there *can be* no increase in employment and there *will be* no increase in real income. Hence after a point —i.e. after the stage of full employment has been reached—increase in expenditure causes inflation.

⁵ Mercantilists wrongly linked the prosperity of a country with its stock of precious metals. As a favourable balance leads to an import of precious metals, they considered it a source of prosperity.

This theory raises public finance to the status of fiscal policy and assigns it a very important role indeed. For fiscal policy can now successfully be employed as anti-cyclical policy. By appropriate variations in expenditure or taxation or both, the state can ensure against, or at least reduce the intensity of, depression and inflation. This method of variations in public revenue and expenditure is called the method of compensatory spending.

In a period of depression incomes and employment stand low and tend to fall on account of insufficiency of aggregate demand. Total social outlay on consumption and investment is not adequate to pitch the national income to the level which will create full employment. Incomes and employment can be increased by increasing public expenditure. It becomes appropriate for public authorities to have deficit budgets, *i.e.* their expenditure should exceed their revenue and the excess be financed from previously accumulated funds or from funds borrowed from the Central Bank.⁶ Increase in public expenditure will increase aggregate expenditure. Aggregate demand will increase and incomes and employment will pick up. As recovery advances, public expenditure may be gradually tapered off. And when the state of full employment has been reached, compensatory spending is needed no more.

When boom conditions develop, public authorities have to take appropriate measures once again. But this time compensatory spending must be negative. The problem is to reduce, or to check a rise in, aggregate demand and this can be done by reducing public expenditure. The situation requires that public authorities have surplus budgets so that more purchasing power is mopped up than is spent.

It must be noted that the purpose of compensatory spending—positive or negative—is to influence aggregate demand and thereby to influence incomes and employment. Hence it is not important whether the items on which expenditure is increased or reduced are productive or unproductive. The relevant criterion is the marginal propensity to consume of the income recipients. In a period of depression additional expenditure is so incurred that it creates incomes for those individuals who will spend away the whole or major portions of their new incomes. The multiplier effect will be large and the economy will pick up fast. Quite similarly, in a period of boom expenditure should be so reduced that those people lose incomes who are spending away the whole or a major portion of their incomes. Once again the multiplier effect will be large and inflationary trends will be curbed soon.

This analysis indicates that public finance is no more just a source of articles of communal consumption, reducing inequalities incidentally. It is a powerful tool for ensuring stability of the economic system. If timely measures are taken, booms and depressions may be avoided or made very mild. And if such malaises have already developed, they may be effectively remedied by appropriate fiscal measures.

⁶ If additional expenditure is met by raising more taxes or by borrowing, the additional money may not come out of hoards; it may be paid in by reducing expenditure. In that case the very purpose would be defeated.

Post-Keynesian developments. Further developments of thought have stressed that, in addition to ensuring stability, fiscal policy can be a helpful tool in bringing about fast economic development. In respect of incomes and employment public expenditure can play its role in two ways. First, by increasing consumption expenditure it increases aggregate demand and thus, *via* the multiplier, increases incomes and employment. In this role it is an instrument for promoting stability. Secondly, public expenditure may take the form of investments which increase income-creating and employment-offering capacity of the economic system. In this case it increases incomes and employment not only immediately but also ultimately. In this role it becomes an instrument for promoting economic growth.

Post-Keynesian economists point out that Keynes and his followers thought in terms of the short-run problem of stability, but they failed to take note of the more important problem, *i.e.* the long-run problem of economic growth. Whereas the short-run problem is more important for advanced countries, the long-run problem is the main concern of underdeveloped countries. And fiscal policy is competent to tackle both.

Conclusion. The view which modern economists take of public finance stands in sharp contrast with the classical view. As has been repeatedly pointed out, classical economists treated it as a means of providing articles of communal consumption, and as an incidental tool for reducing inequalities of incomes. With modern economists, public finance has become fiscal policy which serves as an effective means of achieving economic objectives, *i.e.* for promoting economic growth, for ensuring economic stability, and for achieving reductions in inequalities. In one word, fiscal policy has become an important part of economic policy for promoting welfare of the community. Provision of articles of communal consumption is only one of the constituents of economic welfare and, hence, only one of the objectives of fiscal policy.

Of course, modern economists insist as much on avoiding wastes in public affairs as in private business. But they insist that the term "wastes" must be carefully interpreted. Where goods and services are produced in the public sector, maximum output with least cost must be the guiding principle. If cost of production is unnecessarily high, it implies waste and such wastes must be avoided. But supposing in a period of depression expenditure is stepped up. Then items of expenditure must be selected with an eye on the marginal propensity to consume of the income-receptients. If one item of expenditure results in more goods but creates incomes where this propensity is low, while another item results in less goods (or even no goods) but creates incomes where this propensity is high, the choice must fall on the latter. Though this item produces less (or no) goods, it is not to be treated as a waste but productive of incomes and employment.

Lastly, balanced budget is not considered a virtue any more. In fact it is a positive evil in periods of instability or when the purpose is fast economic growth. Surplus and deficit budgets are as much

often desirable as balanced budgets are sometimes desirable. Whether the budget ought to be a balanced or a surplus or a deficit one, depends on the requirements of the economic situation in the country.

OBJECTIVES OF FISCAL POLICY

Meaning of fiscal policy. We have seen that with classical economists public finance was just a source of provision of articles of communal consumption. The only part of financial activities of the state used for influencing the size and working of the economic apparatus was tariff policy. Tariff policy was used sometimes to encourage individual industries, sometimes to increase general prosperity, and sometimes to correct imbalance in the balance of payments. Anyway, it was only tariff policy which was employed to produce desired results in the run of economic activity. Fiscal policy meant only tariff policy. This is why the two terms were often used synonymously. And it is for this reason that even today commissions appointed to advise on tariff policy are often called fiscal commissions.

To be correct, fiscal policy is much wider than tariff policy. It includes the whole taxation policy. It also includes policy in respect of public loans and deficit finance. In addition, it includes policy in respect of public expenditure. In fact all these various constituents of fiscal policy have to be jointly harnessed for the achievement of objectives which the fiscal policy assigns to itself. Arthur Smithies has rightly observed that fiscal policy means "a policy under which the government uses its expenditure and revenue programmes to produce desirable effects and avoid undesirable effects on the national income, production, and employment."⁷

We started with finding out the criteria for judging a budget. Those criteria are the same as the various objectives of the fiscal policy. We may now enumerate these objectives.

1. *Economic growth.* One major objective of fiscal policy is to promote economic development of the country. It can serve this purpose by helping to step-up saving and investment, by diversion of resources to items of high priority, and by developmental protection.

Budgets can be so framed as to induce people to save and invest. When those parts of incomes which are saved and invested are exempted from taxes, it constitutes an incentive for the people to save and invest more. For instance, in India people get rebate from income-tax in respect of those parts of their incomes which they pay as insurance premia or which they contribute towards their provident funds. A similar concession is given to corporations on that part of their profits which are ploughed back, i.e. which are invested in business by the corporations.

Diversion of resources to items of high priority can be achieved in various ways. In the first place, public authorities may spend

⁷ "Federal Budgeting and Fiscal Policy", *A Survey of Contemporary Economics*, Vol. I, p. 174.

on items like education, health, and housing, and thereby increase the efficiency of individuals. Similarly, by providing means of transport and communication, cheap power, canals, research facilities etc., it may increase the general efficiency of the economic system. Secondly, it may use its resources to bring into existence basic industries like iron and steel, chemicals, fertilizers, etc. etc. Thirdly, by appropriate taxation policies it may divert resources to more urgent uses. For instance, by exemption of some agricultural taxes, more land may be diverted to the production of food if that is considered important and necessary. Lastly, by providing subsidies it can encourage production of specific items without which the pace of development would be thwarted.

Developmental protection may take one of two forms. It may be a simple case of protection to an infant industry. Those industries which are handicapped by a late start may be afforded protection till they can stand on their own legs. Or, secondly, it may be that for the type of economy which is proposed to be evolved, certain industries are considered necessary even though they cannot stand in competition against the foreigners. For instance, it is realised in India that agriculture must continue to play an important role in her economy. If there is a major upset in this industry, it will shake the whole economy. It may, therefore, be considered advisable to have a fertilizer industry within the country even if it has to be protected. Of course such cases will be those of permanent protection.

2. *Stability in production and employment.* Another major function of fiscal policy is to ensure stability in production and employment. In a period of depression budgets must be so framed that expenditures increase and create incomes for those sections whose marginal propensity to consume is high. Similarly in a period of boom expenditures must be cut and spending capacity of the people curbed. In fact fiscal policy should be precautionary rather than curative. Public authorities should be on their guard and see that matters do not go beyond very mild recessions or very mild booms. It is not enough that they lift the economy out of serious difficulties when it is already immersed in them; it is their more important duty to see that the country does not land itself into such serious situations.

3. *Reduction of inequalities.* Revenue collection from the public implies diversion of purchasing power from the people to the state. Expenditure of the state, on the other hand, transfers purchasing power to the people by creating incomes, by giving grants like scholarships, unemployment benefits, etc. and by making available facilities of defence, education, roads, etc. etc. Thus operations, to which budgets give rise, bring about transfers of benefit from some people to some other people. Obviously, these transfers can be so regulated as to reduce spending power of the richer sections of the community and to make benefits available to the poorer sections. Fiscal policy is, therefore, a powerful instrument for reducing inequalities of incomes and opportunities.

4. *Correcting balance of payments.* Fiscal policy is an important instrument for correcting an imbalance in the balance of

payments. A really serious problem arises when the country is faced with a chronic adverse balance of payments. By levying new import duties and raising the old ones, imports may be reduced and thus import obligations may be brought down. On the other hand, bounties help to step up exports and thereby increase export earnings. In both these ways fiscal policy aids in removing or reducing the gap in the balance of payments.

5. *Social objectives.* Fiscal policy may undertake to achieve some social objectives which may or may not be of economic significance. The most important of these is security of life and property against external aggression and internal disorder. Security is essential for any kind of social life and is also conducive to saving and investment. Thus it is an item of high social utility as well as of high economic significance..

Taxes, when levied on the production or use of commodities, tend to raise their costs and prices, and hence reduce their output and demand. Thus they are a good tool for reducing production and consumption of harmful commodities. This is why liquors are taxed heavily in almost every country. Such taxes, whether they help to increase efficiency or not, do help to promote happiness of family life.

Priorities in objectives. It is not possible to state dogmatically the order of priorities of these various objectives. Priorities will differ at any given time from country to country. They will also differ in the same country from time to time. Fiscal policy must decide its course of action in the light of the requirements of the situation prevailing in the country at the time.

Countries differ from each other in respect of their stage of economic development as well as their legal and social framework. Because of the former, differences arise in the order of priorities. Whereas stability and full employment receive top priority in economically advanced countries, fast economic growth must be accorded first preference in underdeveloped countries. Because of the second factor—differences in legal and social framework—the same objectives may be achieved by different fiscal measures.

Conditions vary in the same country from time to time. At one time the country may find itself in the grip of a grim depression and at another time it may be experiencing a run-away inflation. Evidently, quite opposite policies will be appropriate on the two occasions.

FISCAL POLICY IN UNDERDEVELOPED COUNTRIES

Special relevant features. Underdeveloped countries differ from advanced countries primarily in respect of the stage of economic development. In details the differences are multifarious. We may note here those specific characteristics of underdeveloped economies which are relevant to the determination of fiscal policy.

1. *Cause and form of unemployment.* In advanced countries involuntary unemployment is caused by shortage of aggregate demand. Not only

do workers lose employment, other complementary factors like machinery, factory buildings, power, transport facilities, etc. also become unemployed. An increase in public expenditure increases aggregate demand which remedies the situation.

In underdeveloped economies the problem of unemployment differs in its cause as well as form. Unemployment prevails because the complementary factors are not available in adequate quantities. There is shortage of factories, power, transport facilities, and the like. In these economies the problem of unemployment is the problem of shortage of capital. It is a long-run problem and needs to be tackled on that basis. Moreover, the unemployed workers fall back upon agriculture. Marginal product of labour becomes zero, or even negative. But workers *appear to be employed*. Thus unemployment in underdeveloped countries is disguised unemployment.

This makes the principal task of fiscal policy in an underdeveloped economy vitally different from its task in an advanced economy. In the latter the problem of unemployment arises in a serious way in periods of depression. Large numbers of unemployed workers appear on the employment exchanges and before the factories and offices, and they find no jobs nor incomes. In underdeveloped countries unemployment is disguised and does not appear on the surface. Scemingly there is little unemployment, because it is mainly a case of underemployment. To put it in another way, in advanced countries the problem of unemployment, when it arises, is a problem of *unemployed numbers*: in underdeveloped countries the problem of unemployment is a continuous, though concealed, one and it is a problem of *unemployed hours*. The former is accompanied by unemployed complementary resources; the latter is caused by the lack of complementary resources. One is a short-run problem and can be solved by increasing consumption; the other is a long-run problem and can be solved by increasing investment.

2. *Fluctuations in incomes*. There are two major causes of fluctuations in the level of economic activity in underdeveloped countries. One is the fluctuations in the annual crop. The annual crop is a function of the timing and extent of rainfall which is, evidently, a very unreliable factor. A poor crop-yield increases unemployment—or, better still, underemployment—and raises prices. A rich crop, on the other hand, brings plenty and cheapness and also promotes employment. It is rather interesting that whereas in advanced countries unemployment follows upon falling prices, in underdeveloped countries unemployment is often accompanied by rising prices.

The other major cause of fluctuations in the level of economic activity is changes in demand in the export markets. Most of the underdeveloped countries export a sizable proportion of their agricultural and mineral output in exchange for their requirements of manufactures. Reductions in exports reflect themselves in a fall of incomes and adversely affect agricultural population which is the backbone of the community.

Suppose there is a loss of incomes due to a failure of crops. Compensatory spending cannot help much. For though jobs may be created

by compensatory spending, output cannot be increased because of lack of complementary factors like machinery, factories, power etc. etc. If compensatory spending is to be successful, then it should be utilised to create complementary factors.

Suppose there is a fall in demand in the export market. This will lead to a fall in agricultural incomes. Some unemployment may be caused in whatever industries exist, and the unemployed workers fall back upon agriculture. An increase in public spending will not help much, because additional incomes will tend to be spent on imports. This will cause balance of payments difficulties. If imports are restricted by imposing high duties, even then output and employment cannot be increased because there are not enough complementary factors. Two conclusions follow. First, underdeveloped countries ought to have large reserves of foreign exchange. Second, the real solution of the problem lies in creating complementary factors, and in the advancement and diversification of industries.

The main point to be noted is that in underdeveloped countries the multiplier effect of compensatory spending is illusory. When depression prevails in an advanced country and public expenditure is increased, aggregate demand rises and unemployed workers as well as other complementary factors are harnessed to increase output. Thus increase in money incomes is accompanied by increase in real incomes and employment. In an underdeveloped country, on the other hand, the multiplier operates on the monetary level only. Compensatory spending raises aggregate demand and increases incomes. But this is not followed by an increase in output because, though there is unemployed labour, complementary factors are not available. Bottlenecks appear. If these bottlenecks are widespread, inflation develops without solving the problem of unemployment. Thus compensatory spending in underdeveloped countries does increase incomes *via* the multiplier, but it increases money incomes only: real income cannot be influenced appreciably.

3. *Mounting disparities.* In underdeveloped countries, inequalities of incomes is a problem of ever-increasing intensity. As we have pointed out in chapter XXXVI, in an underdeveloped country backwash effects are stronger than spread effects. With the passage of time, inequalities of incomes go on widening. In an advanced economy, on the other hand, spread effects are stronger than backwash effects. Thus in advanced economies fiscal policy is aided by spread effects of economic development in reducing inequalities of incomes. On the other hand, in underdeveloped countries backwash effects impede fiscal policy in the achievement of this objective.

Objectives of fiscal policy. Objectives of fiscal policy are the same in every country, whether it is an advanced country or an underdeveloped one. In every country fiscal policy must aim at economic growth, stability and full employment, and reduction in inequalities. Difference arises in respect of order of priorities only.

In advanced countries incomes are high and savings adequate. Economic growth proceeds at a satisfactory pace. The principal problem is to ensure that fluctuations do not disturb its smooth course. Fiscal policy must be anticyclical. In underdeveloped countries, on the other hand, the problem is to initiate the process of fast development. The central piece of operation becomes capital formation. And to ensure that capital formation proceeds at the requisite pace becomes the special care of fiscal policy for a number of reasons.

First, the ratio of savings to national income is very low. It is as low as 5 to 7%. This ratio has to be raised to 15 to 20%. As incomes and consumption standards are already pitifully low, voluntary cuts in consumption cannot be expected. Direct commandering of resources becomes difficult in democratic countries. Heavy taxation to invest the proceeds for productive purposes and tax concessions on expansion of production, prove very effective measures under such conditions.

Second, upto about fifty years back trade unions were not so well organised and workers did not have an effective say in administration. Capitalist countries could solve the problem of capital formation by keeping wages low. Now the situation is different. Wages cannot be kept low because great inequalities are no more tolerated. The only way to ensure adequate capital formation is by taxation and by expanding the public sector. Fiscal policy assumes a very great importance.

A number of balances have always to be maintained in the run of economic activity of the community. The supply of consumer goods and the purchasing power made available for expenditure on them have to be kept equal. Similarly sufficient savings have to be induced for the planned or requisite investment. And a balance has to be kept between receipts and payments arising from external transactions. The task of maintaining balances is done by price mechanism under capitalism and by state regulation in socialist countries. Now, many underdeveloped countries have taken to the path of partial planning, so that neither price mechanism nor state regulation is given unhindered role for making adjustments. It becomes the task of fiscal policy (as well as monetary policy) to ensure adjustments. It must undertake to modify flows of incomes and outputs appropriately.

We are now in a position to enumerate the tasks to which fiscal policy must give high priority in underdeveloped countries.

1. Maximum importance must be attached to capital formation. Fiscal measures must ensure that more resources become available for investment. It must appropriately curtail consumption and bring about a rise in the proportion of national income which is saved.

2. Fiscal policy must find adequate resources for providing economic and social overheads. It must also reorient pattern of investment in accordance with clearly laid-out policies. In many underdeveloped countries fiscal measures have to be adopted to bring about a change in the pattern of expenditure. Rich people have to be induced to invest

in industrial ventures in preference to luxury palaces, jewellry, and race horses.

3. Whereas existing industries must be expanded and new industries started for reducing pressure on land, increase in productivity in agriculture is also equally necessary. It is not possible to have more industries without providing for their raw materials as well as for the consumption of workers to be employed in these industries. If agriculture is not improved, advancement of the industrial sector will be well-nigh impossible.

An ever increasing surplus has to be created in the agricultural sector and has to be made available for the industrial sector. Large quantities of food are consumed by workers producing investment goods, but these workers cannot immediately furnish the farmers with consumer goods in exchange for food. Hence agricultural sector must save a part of its increasing product. If this is not done voluntarily, suitable tax measures have to be devised for this purpose. Taxation of agriculture must be contrived in the light of this necessity.

4. As fluctuations in the export markets make it imperative that an underdeveloped country should have adequate foreign exchange resources at its command, fiscal policy must ensure a favourable balance of payments in normal years. A comfortable reserve of foreign exchange resources must be created.

5. As in their unhindered course inequalities tend to increase in an underdeveloped country, it becomes a major assignment of fiscal policy to reduce and to keep at minimum distributive inequalities.

PRINCIPLE OF NET AGGREGATE WELFARE

Principle of substitution pervades the whole field of economic activity. Public finance is no exception. This principle provides a good guide to the finance minister in respect of public expenditure and public revenue as well as of adjustment between the two.

We remember that in the field of consumption, principle of substitution becomes the law of equi-marginal utility or the principle of maximum utility. In the field of production it becomes the principle of equi-marginal product. Now we shall see that in the field of public expenditure it becomes the law of equi-marginal social utility or principle of maximum social advantage; and in the field of public revenue it becomes the law of equi-marginal sacrifice or the principle of minimum sacrifice.

Basic principle of public expenditure. The aim of public expenditure is (or should be) similar to the aim of private expenditure, viz. maximisation of total utility. Expenditure has to be so distributed among various heads that marginal social utility is equalised. For if marginal utility at any two points is unequal, total utility can be increased by shifting some amount of expenditure from those points where marginal utility is less to those where it is more. When marginal utility is the

same in all items of expenditure, any disturbance would reduce total utility. Thus the basic principle is similar to the principle of equi-marginal utility, and may be called the principle of maximum social utility.

Every item of expenditure brings some collective benefit as well as benefit to some individuals. Collective benefit may be more prominent in some cases while individual benefit predominates in others. For instance, the former predominates in defence expenditure while the latter predominates in unemployment relief. Both the advantages (individual and collective), together constitute social utility or social advantage. It is the composite of individual and collective benefits which has to be maximised.

Moreover, as has already been pointed out, a people are a continuing entity. Individuals are not certain of their future: a people are. A statesman is as much a custodian of the interest of posterity as of the present generation. Social advantage, therefore, refers to immediate as well as ultimate results of an expenditure.

Basic principle of public revenue. Since marginal utility of money to an individual increases as the sum left with him diminishes, marginal sacrifice resulting from the raising of public revenue increases as the amount collected increases. In other words, in matters of public revenue the law of diminishing marginal utility becomes the law of increasing marginal sacrifice.

Analogous to the principle of maximum utility we have here the principle of minimum sacrifice. If a given sum of money is to be raised from the people, then the amount should be so distributed that marginal sacrifice is equal in all cases. Just as on the basis of the law of diminishing marginal utility we can show that when marginal utility in different uses is equal, total utility is maximum, quite similarly on the basis of the law of increasing marginal sacrifice we can demonstrate that when marginal sacrifice in different cases is equal, total sacrifice is minimum.

As marginal utility of money to the rich is lower than the same to the poor, equality of marginal sacrifice can be achieved by taxing the rich more heavily than the poor. In fact if the amount of revenue required to be raised is small, the whole of it may be raised from the richer sections. The turn of the poor may not come at all, because even when the amount required has been raised from the rich, marginal utility of money to them may still be higher than the same to the poor.

Principle of public finance. In considering the basic principle of public expenditure, we assumed that a given sum had to be spent by a public authority. On the other hand, in the basic principle of public revenue, we assumed that a given sum had to be raised. Given the sum, we have a principle regarding how money would be raised and another analogous principle regarding how it would be spent. But how to decide upon the sum to be raised? The principle for it is.

discovered by considering the questions of expenditure and revenue together.

Every rupee raised as revenue reduces purchasing power with the public. Hence every rupee of revenue, considered by itself, causes a burden. But it is wrong to think of public revenue without any reference to public expenditure to which it gives rise. Every tax is a burden if it is mis-spent. And every tax is good if the expenditure of its proceeds results in more social advantage than the burden caused by the tax.⁸ This brings us to the basic principle of public finance. Public revenue and expenditure ought to be extended so long as social advantage resulting from the marginal rupee of expenditure exceeds the burden caused by the marginal rupee raised as revenue. Optimum of public finance is the point at which sacrifice caused by the marginal rupee of revenue just equals the social advantage resulting from the expenditure of marginal rupee. Since at the optimum point aggregate *net* welfare resulting from public finance is maximum, the principle is known as the principle of maximum *net* aggregate welfare.

The optimum of public finance can be shown with the help of Fig. 40.1. Along the

x -axis, are shown quantities of money spent or raised as revenue. y -axis shows marginal benefit and marginal sacrifice, respectively, of different quantities. MS is the marginal sacrifice curve. It slopes upwards to the right because as the amount raised as revenue increases, marginal sacrifice also increases. MB is the marginal social benefit curve. Obviously, it will slant down to the right. Upto OM , every

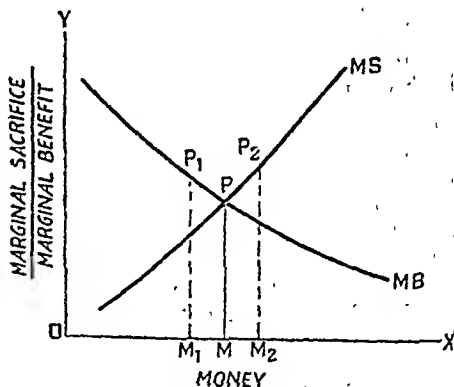


Fig. 40.1

additional rupee of revenue causes less sacrifice than benefit. At OM marginal sacrifice equals marginal benefit. As the sum involved increases beyond OM , marginal sacrifice exceeds marginal benefit. OM represents the optimum of public finance. By raising and spending this amount, the state will cause a maximum *net* increase in economic welfare of the community. An amount smaller or larger will cause a less increase in economic welfare than the maximum possible. This is the all-pervasive principle of substitution as applied to public finance.

Difference from the case of individual. There are two very important points of difference between the role of the principle of substitution in

8. Thus the maxim that every tax is an evil is the wrong conclusion of a wrong approach.

the field of public finance and in the field of individual finance. First, individual's equalisation of *marginal utility* in various items of expenditure is instinctive; that of finance minister is deliberate. In other words, the principle of substitution is in one case an analytical statement of what happens, and in the other case it states what ought to be done.

The principle of equi-marginal utility is based on the law of diminishing utility. The principle of equi-marginal sacrifice and of maximum social benefit are also based on the same law. But it is incorrect to invoke the sanction of the law of diminishing utility in the field of public finance because that involves inter-personal comparisons of utility. The law of diminishing utility is incompetent to give such a sanction. If appeal is made to social justice, that would be a different matter.

Difficulties of implementation. It is much easier to state the above principle than to practise it. Many difficulties arise, some of which are formidable.

1. *Burden of public revenue is a composite.* In assessing the burden of public revenue two steps of aggregation are involved. In the first place there are many effects of raising public revenue. For instance, some taxes lead to a cut in consumption, others to a cut in saving. The former reduce efficiency, the latter reduce investment. Also, raising of public revenue brings about changes in distribution of wealth. There is no method by which these effects can be added up.

Secondly, burden of public revenue falls on different persons. Can we add up these burdens? As we know, marginal utility of money to different persons is different. Hence adding up their money burdens would be as meaningless as adding up the temperatures of different kinds of thermometers.

2. *Benefit of public expenditure is a composite.* Benefit of expenditure, like the burden of taxation, is a composite quantity. Expenditure gives security and protection. It increases the incomes of some people. It increases efficiency of individuals as well as of the productive system. These are, again, items which cannot be added up.

3. *Large units.* The principle of equi-marginal sacrifice and of maximum social benefit, and of equalising marginal sacrifice with marginal social benefit, can be implemented only when units involved are small. In the case of public finance, units involved are large and indivisible. It is not a case of raising a few more (or less) rupees and spending a few more (or less). Lakhs and tens of lakhs form the units. Nationalisation of land, digging of a canal, introduction of compulsory education, social insurance, unemployment relief—all involve large expenditures. Equalisation at the margins is difficult to achieve.

4. *Irrevocability.* Principle of substitution can, as a rule, be implemented by the method of trial-and-error. Changes are unavoidable in search of the optimum. But in public finance there are

many obstacles in the way of introducing changes. In the field of expenditure, a great friction is caused by vested interests. In the field of public revenue, there is always the difficulty of finding out alternative sources. In both cases, there is an important difficulty created by the fact that a government is a slow-moving machinery. Changes take time to be effected and by the time changes are made, the situation might be different.

Shortcomings of the analysis. The above difficulties of implementation are insurmountable and are enough for us to conclude that the principle proves of little avail in practical policy. Yet its protagonists have generally observed that it is better to lay down a correct principle and then let the policy approximate to it as far as possible than not to lay down any principle at all. But unfortunately there are important theoretical flaws in the above analysis.

This analysis assumes that raising of public revenue is a burden only. This is incorrect. Taxation of consumption of harmful luxuries has ethical value. In addition, it helps to increase efficiency of the people. Such taxes may cause some burden, but they yield direct benefit also. Similarly, finances may be secured by printing notes. Now this method by itself is beneficial at times. It is not that in periods of depression raising revenue for additional expenditure by taxation is more burdensome and by printing notes less burdensome: the correct position is that the former method proves burdensome and the latter beneficial. Thus treating raising of revenue as a source of burden only is wrong. Similarly expenditure may be harmful in periods of boom. Hence to treat it as a source of benefit only is also wrong.

Secondly, this analysis is based on the assumption of a balanced budget. It is assumed that whatever is raised as revenue is spent; or as much is raised as revenue as is to be spent. This also is wrong. Sometimes more revenue may be raised and less spent. In periods of boom, there is an advantage in raising revenue and not spending it. Such cases, which are probably the most important from the point of view of fiscal policy, are not covered by this analysis.

Conclusion. Nevertheless, it is a merit of this analysis that it takes account of all methods by which revenue may be raised. And it gives us a sound *theoretical* principle if the following precautions are taken:

1. The basis for taxing the rich more and the poor less is found in social justice rather than in the law of diminishing utility.
2. All burdens as well as benefits of public revenue and public expenditure are simultaneously taken into account.
3. And even when money raised is not spent, the benefit of not spending is reckoned.

CHAPTER XXXXI

PUBLIC FINANCE (*Continued*)

PUBLIC EXPENDITURE

Kinds of public expenditure. The state exists to preserve social order and to improve social life of the community. These are the two primary functions of the state and all other functions are derived from these. It is these two primary functions which determine the items on which public authorities spend. Expenditure on civil and military administration serves the first function. Expenditure on health, education, canals, bridges and railways serves the second function. Yet there are several items of public expenditure which serve both the functions. Salaries of ministers, interest payments on debts and the like, may arise because social life has to be kept orderly or because of the attempts made to improve the quality of social life.

A distinction is sometimes made between obligatory expenditure and optional expenditure. The former includes those items on which the state must spend. Expenditure on defence and contractual payments are cited as examples. Optional expenditure refers to those items on which the state may or may not spend. Expenditure on education and health is classified as optional expenditure. This distinction is neither very scientific nor very helpful for practical purposes. Contracts, which are said to give rise to obligatory expenditure, can be changed, modified, or even cancelled. For the rest, the distinction comes to be based on what is necessary expenditure and what is not. Evidently whether an item is necessary or not, is a matter of opinion and opinion changes from time to time. There are millions of people in the world today who consider expenditure on education more necessary than expenditure on defence.

An important classification of expenditure is into real or exhaustive expenditure and transfer expenditure. The former means spending on goods and services which could have been used for some other purpose. Transfer expenditure means passing on the money collected as revenue to some other persons, or body of persons. Pensions and debt charges are good examples of transfer expenditure. Expenditures on armament, education, health etc. are exhaustive expenditures.

There are many other ways of classifying public expenditures. Each one of these classifications is helpful for one purpose or the other, but none of these classifications has much significance for the study of the theory of public expenditure.

Increasing public expenditure. State expenditure has been increasing

in every country during the last two centuries.¹ This is explained in terms of Wagner's law which states that there is a persistent tendency in the activities of the state to increase intensively as well as extensively. The functions already in hand are performed on a continuously increasing scale. In addition, new functions continue to be undertaken. How can we explain these tendencies?

One explanation lies in the change in public opinion as well as expert opinion regarding the role of the state. It is no more a police state in which case "every particle of expenditure beyond what necessity absolutely requires for the preservation of social order and for protection against foreign attack is a waste and an unjust and oppressive imposition on the public."² Now the state must function as a welfare entity, which has not only to preserve the social order, but must also improve social life. It has to ensure a healthy and hygienic living. It must actively endeavour to raise living standards of the people. It must undertake to provide economic and social overheads. Even the basic and key industries must be started by the state if individual enterprise is hesitant to do it. Consequently, the public sector has been expanding fast and the expenditure of public authorities has been mounting.

Modern developments have imposed some new functions on the state. In the first place, advance of democracy has increased the faith of the people in the government. With the replacement of monarchs by popular ministers, people have come to believe that the state can now safely be assigned the duty of providing amenities to the public on an increasing scale. Secondly, big industrial and commercial centres are springing up in every country. The task of ensuring healthy and hygienic living is assuming new importance and new proportions. Chimney soots, shortage of land space, mounting rents, and increasing population make it incumbent on the public authorities to provide more and more hospitals, public parks, cheap houses, water and electric power. Thirdly, larger and larger number of people are coming to appreciate the benefits of education and the demand for educational facilities is increasing. Educational institutions, public libraries, and research facilities are now claiming large chunks of revenues of many public authorities. Lastly, many states have taken to planned development which has, naturally, increased their investment expenditure as well as expenditure on administration.

One very important factor is the mounting complexity and cost of wars as well as higher cost of preparedness for it. Tanks, destroyers, aeroplanes, rockets and atomic weapons are all so costly. International relations have been marked by tenseness and strain throughout the twentieth century, and every war now becomes a global war so that no country can insulate itself against it. Consequently,

1 For instance, in U.S.A. total federal, state and local expenditure increased from £ 2.7 billion to £ 102.5 billion between 1913 and 1953. Even allowing for the rise in prices in these forty years, expenditure increased to 14½ times. cf. Poole: *Public Finance and Economic Welfare*, p. 7.

2 Sir H. Parnell, quoted by Dalton, *Public Finance*, (9th edition) p. 195.

expenditure on defence constitutes a very high proportion of public expenditure. India spends about half of its central revenue on defence, and U.S.A. spends as much as 85% of her federal revenue on it. And these high proportions show little promise to decline.

Role of public expenditure. How does public expenditure play its role? That is, what is the mode by which public expenditure produces the desired results? The answer is that the desired results are produced by variations in the volume of public expenditure and by so planning the expenditure that resources are diverted to useful channels.

1. *Variations in public expenditure.* Cyclical fluctuations can be counteracted by variations in public expenditure. In a period of depression, incomes and employment can be increased by increasing public expenditure. The most appropriate method is deficit finance, i.e. by raising public expenditure above revenue and meeting the deficit from funds accumulated in the past or by printing notes. For the crux of the problem in a period of depression is the increasing propensity of the people to hoard. If additional public expenditure is covered by taxes, people who are made to pay additional taxes may cut their expenditure to that extent and thus no *net* increase in expenditure may result. Even borrowing will not help if people lend out of sums which they would otherwise have spent. Hence deficit finance is the surest method of increasing aggregate expenditure. Moreover, public expenditure has to be so planned that it creates incomes in those sectors where propensity to hoard is low.

In a period of boom public expenditure must be reduced so that more purchasing power is mopped up from the public than is spent. Consequently aggregate spending of the community falls and inflationary trends are curbed. Of course public expenditure must be cut in those sectors where it is creating incomes for the people with high propensity to spend.

2. *Diversion of resources.* Carefully planned public expenditure diverts resources from consumption to investment. Expenditures on education, health and housing create human capital. Expenditures on roads, railways, etc. increase efficiency of the economic system. Expenditures on production of cheap power and on digging of canals create industrial climate, and if investments are made in iron and steel industry and fertilizers and chemicals industries, the country is provided with industrial base. Thus public expenditure can help to increase investments. The corresponding saving is either induced by taxation and borrowing, or is forced by deficit financing.

A reduction in inequalities is now an accepted function of public finance. Public spending plays its role here also. Facilities like free education, social insurance, stipends, unemployment benefits, are designed to benefit poorer sections of the society. Similarly, cleanliness services, water supply, etc. are as much available to the poor as to the rich. In the absence of these facilities, the rich may be able to provide themselves with these services; the poor cannot. If

such arrangements are not made by public authorities, poor people would be greater sufferers. Thus, while tax collection can help in reducing inequalities by approaching the rich, public expenditure performs the same function by benefiting the poor.

DIRECT AND INDIRECT TAXES

Meaning. A distinction is made between direct and indirect taxes on the basis of possibility of "shifting". The persons, from whom a tax is collected, are said to bear the impact of the tax. Such persons may pass on the money burden to others through some process of exchange. The fact of passing the money burden on to others is called shifting and the persons, to whom the burden is passed on, are said to bear the incidence.

When impact and incidence of a tax fall on the same persons, i.e. when there is no shifting, the tax is called a direct tax. On the other hand, when those from whom the tax is collected shift the money burden on to others so that the impact and the incidence of it fall on different sets of persons, it is an indirect tax. Taxes on incomes are generally considered to be direct taxes while those on commodities (partial outlay taxes) are said to be indirect taxes.

The distinction between direct and indirect taxes does not come to a clear-cut classification. For instance, even taxes on incomes may be shifted on to employers. After all incomes are earned by the sale of services and shifting is possible where exchange is involved. Similarly, taxes on commodities may not be shifted as those who bear the impact may not find it profitable to do so. A real difficulty arises when the tax is only partly shifted, the other part remaining behind. In that case the tax becomes partly direct and partly indirect. And most of the commodity taxes fall in that category. Notwithstanding this fact, administrators do distinguish between direct and indirect taxes, including taxes in incomes, wealth, property and expenditure in direct taxes and all partial outlay taxes in indirect taxes.

Relative merits of the two kinds of taxes. Direct taxes can easily be made to conform to the canon of equity. They lend themselves to graduation, though there is no universally accepted standard of progressiveness. Indirect taxes may be made progressive by taxing more of luxuries than of necessities and making the rates of taxes on luxuries higher than those on necessities. But a difficulty arises. If luxuries are taxed, the total yield tends to be low. If rates of taxes on luxuries are raised high, the yield tends to dry out. Hence if indirect taxation is to be broadbased and is to conform to the canons of productivity and elasticity, these taxes have to be imposed on necessities. And as this is done, this category of taxes ceases to conform to the canon of equity.

Direct taxes conform to the test of certainty. The taxpayer knows how much he is to pay and at what time. The state can also fairly accurately estimate the yield. In the case of indirect taxes, yield

is rather difficult to estimate. But indirect taxes conform to the canon of convenience more satisfactorily than direct taxes. Direct taxes are paid in lump sums or in large instalments. Indirect taxes are paid in small dribblets. The taxpayer may pay more or less or nothing according as he decides to purchase more or less or none at all.

Large staffs are necessary for indirect taxes. Not so for direct taxes. Thus the latter are more economical than the former. But for direct taxes people have to keep detailed accounts and those pay more who do not desire to deceive. Direct taxes have rightly been called taxes on honesty. Moreover, there is a great possibility of evasion of direct taxes than of indirect taxes.

Direct taxes are felt when they are paid. Indirect taxes are not so felt because they are "wrapped" in the price. Direct taxes, it is said, arouse social consciousness and, hence, great interest in civic affairs. True! But for that reason direct taxes are also prone to arouse opposition from the people. That danger is much less potent in the case of indirect taxes. Moreover, indirect taxes can be used to reduce the consumption of harmful luxuries. No such use can be made of direct taxes.

Indirect taxes are better instruments for diverting expenditure on consumption to investment. Every tax on a commodity discourages its production as well as consumption. If a large number of commodities are taxed, consumption expenditure is likely to come down, especially if the commodities taxed are luxuries. On the other hand, direct taxes fall heavily on upper slabs which are the main source of savings. If revenue raised from such taxes is not invested, it constitutes a leakage from capital formation.

Conclusion. Can we express our preference in favour of direct taxes or indirect taxes? The answer is, no! Disraeli rightly compared direct and indirect taxes to two equally attractive sisters. The finance ministers of today require large sums of money for the increasing state activities. Direct taxes alone does not help. They must supplement them with indirect taxes. And in that process they so broaden the tax system as to cancel out the shortcomings of individual taxes, and to make the tax system as a whole conform to the various canons of taxation as nearly as possible.

INCIDENCE OF A TAX

Burdens of a tax. Incidence of a tax refers to direct money burden. It should be distinguished from direct real burden which means burden of the tax in terms of utility. Obviously, a given tax money paid by a rich man means a less direct real burden than if it is paid by a poor man. Similarly, direct money burden is different from indirect money or real burden. Indirect money burden refers to money lost over and above the tax money. For instance, when a tax is collected from the producers of a commodity, they attempt to shift the burden on to the buyers. But some time elapses between the collection of money

by the taxing authority from the producers and the latter recovering it (or a part of it) from the buyers. Meanwhile the producers lose interest. This is indirect money burden. Indirect real burden refers to the loss of welfare resulting from reduction in the consumption of the commodity.

Thus incidence of a tax is only one of the effects of a tax. There are other effects like the indirect money burden and indirect real burden. Even in respect of direct burden, direct real burden is more significant than direct money burden. Yet the question of incidence has its own importance. Tax authorities ought to know from whose pockets the tax is being paid. This is why economists discuss this question in some detail.

Incidence of an indirect tax. A tax can be shifted only through the process of exchange. The sellers of the taxed commodity endeavour to shift the burden by raising the price of the commodity. The incidence is said to have been shifted to the buyers to the extent that the price rises. The extent of rise in price depends on the elasticities of demand for, and supply of, the commodity.

In Fig. 41.1 DD and SS are respectively the demand and

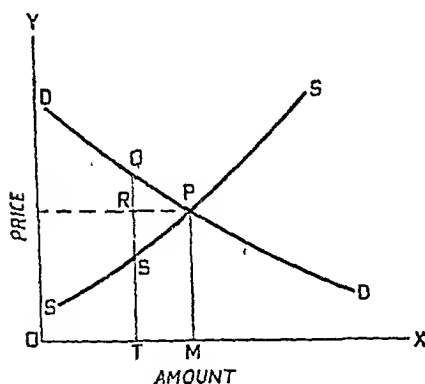


Fig. 41.1

supply curves of the commodity. PM is the price. After the imposition of the tax, the price rises to QT . But while the buyers pay a price of QT per unit, the sellers receive only ST per unit. The balance, QS , is the tax per unit and is intercepted by the government.

For sellers, the price has fallen from RT to ST . RS , therefore, represents incidence on the sellers. For buyers, the price has risen from RT to QT . QR is thus the incidence on the

buyers. That the ratio of these two burdens, i.e. RS/QR , depends on elasticities of demand and supply can be shown as under:—

$$\frac{\text{Elasticity of Demand}}{\text{Elasticity of Supply}} = \frac{MT/OM}{QR/PM} \div \frac{MT/OM}{RS/PM} = \frac{RS}{QR}$$

The higher the elasticity of demand and the lower the elasticity of supply, the less will be the burden on the buyers and the more will be the burden on the sellers. If demand is inelastic, or supply is perfectly elastic, the whole burden of the tax will fall on the buyers. On the other hand, if demand is perfectly elastic, or supply is inelastic, the tax will be wholly paid by the sellers.

It is immaterial whether the tax money is initially collected from the sellers or the buyers. If it is collected from the sellers, they attempt to pass on the burden to the buyers, and *vice versa*. But how far a group succeeds in shifting the tax depends on conditions of demand and supply. These conditions being given, incidence is divided between the two in accordance with elasticities of demand and supply.

Taxes on income and property are generally considered to be direct taxes. But there are few taxes which are not shifted at all. Take, for instance, earning of income, which can be viewed as selling of work or sacrifice of leisure. A tax on income discriminates against work. How much leisure would replace work, depends, on the one hand, on marginal utilities of work and leisure, and, on the other, on the rates and progression of tax. There is thus an exchange involved, and the shifting of the tax is possible. Similarly, when property is taxed, the incidence gets divided between participants in exchanges to which construction and lease of property give rise.

OTHER EFFECTS OF TAXES

The complications. As has been said above, incidence is only one of the effects of a tax. What we should really find is the aggregate effect of a tax on the welfare of the community. We have already noticed that the total burden of a tax is a composite of effects on consumption, production and distribution of wealth. This composite is difficult to measure, more so because many individuals, who are not equally rich or poor, are involved. There are three more facts to add to the confusion. First, taxes produce not only adverse effects but also some effects favourable to welfare. Secondly, taxes give rise to exchanges which diffuse the effects through the community. Lastly, a tax may be welcome to the community as a whole if the sum collected is spent one way and may be unwelcome if it is spent in another way. The problem is to compare the pictures of two positions—one with tax and the other without tax. Obviously, one of the pictures has to be imagined and will in many details be imaginary. The composite effect of a tax or a tax-system is difficult to ascertain. We may, however, enumerate some possible effects of some taxes.

1. *Taxes on commodities.* A tax on a commodity may be imposed on its production, import, sale or purchase. In any case, it is shared between its sellers and buyers, in accordance with elasticities of demand and supply. Unless the supply or demand is inelastic, the quantity produced and consumed will be reduced. There will be a loss of consumers' surplus or consumers' welfare. That is not all. The tax itself may throw the commodity out of fashion. The loss of consumers' surplus will then be large. If, on the other hand, the tax increases "display value" of the commodity, loss of consumers' surplus will be small.

Demand for the related goods also changes. In the case of complements, there is a reduction in demand and output, therefore there is a loss in consumers' surplus. Similarly with raw materials

of the taxed commodity and goods for which the taxed commodity is a raw material. Demand for substitutes, and hence consumers' surplus derived from them, increases. Workers and producers employed in the production of substitutes gain, those employed in the production of other related goods lose.

Taxes levied on the production, sale, or purchase of luxuries fall on the people with higher incomes. Taxes on necessities are regressive because they fall on the rich and the poor alike, and the poor have less capacity to pay. To ensure adequate revenue, taxes have to be imposed on commodities of wide use and such commodities are no other than necessities. But if taxes on necessities are accompanied by taxes on luxuries, their regressiveness may be reduced.

2. *Taxes on incomes.* Taxes on incomes are generally progressive. Concessions are allowed in respect of members of the family. They are, therefore, conducive to reductions in inequalities. This is one important merit which is claimed for taxes on incomes, as also for other direct taxes.

Efficiency of the people depends on ability to work and will to work. Ability to work is not materially affected by taxes on incomes. For incomes of certain level are exempted from paying taxes and the exemption limit is generally fixed at such a level as is considered necessary for maintenance of efficiency. Will to work is of course affected adversely, especially if tax-rates for higher slabs of incomes are heavy. It stays people from undertaking risky adventures. Two facts are, however, important in this respect. First, enterprising individuals take pride in owning large businesses and extending them. Secondly, the "pinch" of the tax is reduced with the passage of time. A new tax, or an increase in its rate, pinches more than when it has become old. Nevertheless, very high rates of income tax do discourage many businessmen from extending the size of their business.

It is said that capacity of the community to save is not affected by taxes on incomes, because proceeds of such taxes are after all spent and thus made available to the people. But in so far as taxes on incomes and consequent expenditures transfer incomes from the rich to the poor, they do reduce the community's capacity to save. In many countries rebates are allowed in respect of savings. Such provisions are encouraging to saving.

3. *Death duties.* Of the other direct taxes, we may briefly consider death duties or estate duties. These are said to influence production adversely through their effect on savings. It is alleged that when a person knows that a substantial proportion of what he saves will go to swell the coffers of the state, his inclination to save—and, hence, his inclination to work hard and earn more—declines. This is correct in the case of the rich, especially when the rates of death duties on upper slabs are high. But small inheritances are not taxed. Moreover, even though a person's savings are taxed after his death, he can use them whenever he desires to do so in his life-time. Hence will to save

is not much affected by death duties, except in the case of a few with large incomes, when the tax is very steep.

PUBLIC DEBT

Capital budget. Public revenue is usually augmented by borrowing. In many countries, including India, figures relating to dealings arising out of public borrowings are shown separately in the budget, and this part of the budget is called capital budget. In the capital budget, receipts from loans to be raised during the year are shown as revenue. Payments on account of interest as well as principal of the past loans and productive assets to be created are shown as corresponding "expenditure." Evidently, like the current budget, the capital budget may be a balanced, a surplus, or a deficit one.

The distinction between capital budget and current budget is one of convenience. It is helpful in the comprehension of various aspects of the budget. Nevertheless, current expenditure is often met from loans. This always happens in periods of war or other emergencies. Similarly some productive assets may be created out of the proceeds from taxation. It is, therefore, a wise suggestion that whether the budget is a surplus or a deficit one, can be judged by considering the current and the capital budgets together.

Public loans and private loans. Public loans, like private loans, divert funds from the lenders to the borrowers. In other words, raising of loans in both cases leads to a diversion of resources from the lenders to the borrowers. As the purposes for which the lenders might have used their resources are generally different from those for which the borrowers use them, public debts like private debts cause changes in the assortment of goods demanded and produced. Less of those goods are demanded and produced on which the lenders would have spent if they had not lent. And more of those goods are demanded and produced on which the borrowers spend the borrowed money. Moreover, as in the case of an individual so in the case of a public authority, loans may be consumption loans or production loans. In the case of both, production loans promise to create assets which help to pay interest and repay the loans. Quite similarly in the case of both all consumption loans cause a strain on future resources.

Nevertheless, there are important differences between public debts and private debts. In the first place, the state is a permanent entity which the individual is not. It is, therefore, possible for a public authority to borrow against a perpetual annuity: this kind of loan is not possible in the case of an individual. Secondly, the state may borrow from its own citizens or from the citizens of other states. When it borrows from its own citizens, it is borrowing from itself. This, once again, is not possible in the case of an individual. He cannot borrow from himself: he may raise an external loan, but he cannot raise an internal loan.

The most important difference between public debts and private

debts arises from their respective effects on welfare of the community. No doubt, it is possible that a private individual borrows money for business purposes and the lender advances it from the funds which he would have otherwise spent. But such cases are rather rare. For the sums required for business purposes are too large to be spared from consumption expenditure of the lenders. Generally such sums are lent out of savings. On the other hand, it so often happens that the lender lends out of his savings and the borrower uses it for consumption. Such loans cause a strain on the future resources of the borrower and adversely affect capital formation of the country. Public debts may produce different effects. Loans raised by the state for productive purposes may be subscribed in small sums by a large number of individuals, and these sums may, in many cases, be paid out of funds which would otherwise have been spent or would lie unused. Moreover, even the consumption loans of the state may conduce to the welfare of the community, especially in periods of depression. In such periods, the real need of the economy is an increase in aggregate demand, and the state can serve this end by increasing its expenditure. Thus an increase in an individual's consumption expenditure, financed by loans, may bring about his ruin, but an increase in the consumption expenditure financed by public loans may promote welfare of the community. Similarly, a reduction in the debt of an individual generally conduces to his interest, but in periods of war and boom repayment of public debt leads to an increase in aggregate expenditure, and this does not prove conducive to the interest of the community.

Classification of public debts. There are many ways in which public debts may be classified. Such classifications are made on the basis of period of the loans, mode of repayment, purposes of borrowing, residence of the lenders, etc. etc.

1. *Period and mode of repayment.* Loans may be raised for short term or for long term. On one extreme lie the Treasury Bills against which loans are raised for only three months. The other extreme form is that of loans which are raised for perpetuity, i.e. on which interest is paid every year but capital is never repaid. The latter kind of debts are called *funded debts*.³ Payment of interest on them stops only if and when the government purchases back the corresponding securities, called consols. However, most of the loans raised by the state are repayable after ten to twenty-five years.

A peculiar form of public debt is that against terminable annuity. In this case the lender is paid an annual sum for a fixed number of years. Arrangements are not unknown where terminable annuity is made tapering, i.e. where the sum payable annually goes on diminishing at a given rate till it becomes zero.

3 The words "funded" and "unfunded" have been assigned different meanings by different writers. According to Adam Smith, funded debts are those for the repayment of which particular funds or sources of revenue have been pledged, and in the case of unfunded debts no such pledge is made. According to Dalton, the distinction between the two is on all fours with the same between long-term and short-term loans. There are other writers who define the term funded debts as above.

2. *Purpose of the loan.* Loans, which are raised for creating income-yielding assets, constitute productive debt—sometimes also called reproductive debt. Payment of interest and repayment of the principal are made out of earnings of the assets. On the other hand, loans which are contracted for meeting current expenditure or for creating non-income-yielding assets—e.g., parks—constitute unproductive or deadweight debt. Payments falling due on account of such debts are made from other sources of public revenue. Generally interest on them is paid from taxation and the principal from some fund or by raising fresh loans.

Between productive and unproductive debt lies a unique category, called protective debt. Such debts create income-yielding assets. The yield of these assets is not adequate to cover interest on these debts, but they otherwise save expenditure to public authorities and thus indirectly pay their way. Public debts of the Government of India contracted for digging canals were often of this kind. The yield from water-rates was not adequate to pay interest on these loans, but such investments saved the government much of the expenditure which it used to incur in periods of famine.

3. *Residence of the lenders.* Distinction between internal debt and external debt is very significant. The former consists of loans raised by a public authority from the residents of the country while the latter are raised from residents of foreign countries. Internal debt differs from external debt in two important respects. First, neither does the raising of an internal loan augment national income, nor does the repayment cause a drain on it. It becomes a case of the residents paying to the residents, or the right hand paying to the left hand. An external loan, on the other hand, augments national income during the year in which borrowing is done. As a result of it resources flow into the country. Its repayment as well as payments of interest cause a drain on national income, as a result of which resources flow out of the country. Thus such payments can be made from the sale proceeds of exports or from foreign credits. Secondly, an internal loan is raised as well as repaid in domestic currency. An external loan, when contracted, makes foreign exchange available to the state. At the time of repayment it causes a drain on the foreign exchange resources. If adequate foreign exchange is not available, repayment of an external loan may cause insurmountable difficulties.

4. *Other criteria.* Public debt has been classified in various other ways also. For instance, loans may be voluntary or compulsory, though compulsory (or forced) loans are now rather rare. Similarly, payments arising from a debt may be made a first charge on the public revenue in general or an item of revenue in particular. This arrangement becomes necessary in the case of public authorities whose finances are not in a happy state, or people's faith in whose ability to repay is not high.

Repayment of public debt. Adam Smith and his followers have condemned the existence and continuance of large public debts. They hold that servicing of such debts very adversely affects capital forma-

tion. Taxes reduce people's power to save and invest. Taxes imposed for the payment of interest on public debts continue to do harm year after year. They plead, therefore, that the earlier the public debts are paid off, the better it is for the community. Many modern writers, on the other hand, hold the view that there is no necessity that public debts should be repaid. Interest paid on these debts forms a small part of the total national income, it therefore causes little burden. They further assert that repayment of public debts may cause a positive harm to the interest of the community. It will cause unbearable burdens if repayments are done by taxation. And it will cause ruinous inflation if repayment is made by taking resort to the printing press.

It must be noted to start with that a productive debt, by definition, creates its own sources of repayment. It is only the unproductive debt which creates the problem of finding money for the payment of interest as well as the repayment of loan. It is in the process of finding this money that effects on economic welfare are produced.

So long as debt is not repaid, interest on it has to be paid every year and thus a portion of revenue of the public authority remains earmarked for this purpose. Once the principal has been repaid, annual payment of interest ceases. The choice is between continuing to pay interest and paying away the principal once for all.

Servicing of an internal loan does not cause any direct money burden for the community. It is a case of one section of the community paying to another section. Purchasing power of the community as a whole remains unchanged. But this should not be taken to mean that servicing of internal debt is all smooth sailing. It has important distributive implications. Taxes levied for the purpose are paid by almost all classes of the people, including the poor. On the other hand, holders of government securities are generally rich people. Thus payments of interest on internal debt result in some transfers of wealth from poor sections to rich sections of the community. The consequent increase in inequalities constitutes direct real burden of these payments. It must, however, be noted that transfers thus caused are conducive to capital formation. Creditors of public authorities are generally rich people and have a high marginal propensity to save. All transfers of wealth to them from poor people, who have a high marginal propensity to consume, increase savings and investments. But such taxes, like all taxes, adversely affect people's desire to work. Moreover, it becomes a case of the old gaining at the cost of the young, and the idler enjoying at the cost of the working population. Hence what is gained in one direction is lost in the other. If the public authority pays interest on public debt by reducing its expenditure, it generally becomes a case of ill-conceived economies. Often it is the expenditure on education and health which suffers. Efficiency of the people is adversely affected. This is the loss in production. Also, as it is poorer sections who lose more if these facilities are withdrawn or reduced, inequalities of distribution increase.

All the above effects are produced in servicing external debt also. But servicing of external debt has two additional effects. First, it does cause a direct burden on the community. Purchasing power which is taken away from some members of the community is not paid back to other members: it is paid away to outsiders. There is a drain on the resources of the country. Secondly, payment of interest to foreigners necessitates finding foreign exchange for the purpose. This also creates difficulties so often.

No doubt annual payments of interest cause some direct and indirect burdens on the community and clearance of external debt will eliminate this annually recurring burden. But clearance of the debt itself will cause very heavy burdens during years of repayment. All the effects, which are produced by interest payments, will be multiplied manifold. Strains created may be too heavy for the community to bear. The drain from national income may very adversely affect capital formation and economic welfare. Hence even if public debt is to be repaid, repayment must be spread over long periods.

An important factor to be considered is that most of the unproductive debts are raised in periods of war when prices as well as rates of interest are high. After a war prices generally fall and the value of money rises. This makes real burden of interest payments heavy. Also, rates of interest fall and, as a consequence of it, prices of securities rise. This makes clearance of debt heavy. It may be said that the secular trend has been one of rising prices. Even then there is a case that war debts be cleared off just after the war. For otherwise, as the experience of all countries well illustrates, war debts go on accumulating. Larger and larger proportion of public revenue comes to be locked up for servicing of the debt. To the extent that this happens, public expenditure becomes inelastic, and it becomes difficult to tune fiscal policy to requirements of the economic situation.

Methods of debt redemption. Before discussing the methods of redemption of public debt, we must distinguish between real and fictitious redemption. A debt will be only fictitiously redeemed if it is repudiated or converted. Repudiation of debt means refusal to repay the debt, which the government can do with impunity because of its legal powers. By enacting a law it may cancel its debt and make it impossible for the lenders to claim repayment through the courts. Evidently, this is not clearing an obligation but denying it. Similarly, if a new debt is raised to repay an old debt, it is not a redemption of debt: it is only a renewal. Of course, if the new debt is contracted at a lower rate of interest, the burden of debt charges on public revenue will be reduced. But the debt will be there all the same. Ruling out repudiation and conversion as the methods of debt redemption, two methods remain. These are the method of sinking fund, and the method of a capital levy.

1. *Sinking fund.* Sinking fund has been properly described by Dalton as the debt-redemption fund. There is no set pattern for the creation or the use of a sinking fund.

One method of creating a sinking fund is to credit the proceeds of a specific tax to the fund. This is definite sinking fund. Another method is to credit to the sinking fund the surplus of the budget, whenever it arises. This is an indefinite sinking fund. A third method is a combination of the above two, i.e. the proceeds of a tax *plus* the surplus in the budget (or *minus* the deficit) may go to the fund. A fourth method is that a fixed amount (or a fixed proportion) from the revenue is credited every year to the fund. This gives rise to what has been called a cumulative sinking fund. For as repayment of debt proceeds, the interest payment decreases and, therefore, the fixed annual amount reduces the debt progressively. Lastly, the sum credited from the revenue may decrease as the size of the public debt decreases.

Regarding the use of a sinking fund, one procedure is to continue paying interest from current revenue and to let the fund accumulate till it equals the debt. Then the whole sum is paid off. Another procedure is to pay off every year (by, say, purchase of securities) the sum which becomes available. Similarly, sinking fund may be meant for paying off all or any debt ; i.e. it may be *frec.* Or it may be attached, i.e. it may be meant to pay off a particular debt.

If a sinking fund is to successfully do its job, it must conform to three tests. First, it should pay off the debt within a reasonable period. A long period is as burdensome as just paying interest. Moreover, if spread over long period, the repayment would probably never be completed because in the meanwhile need for fresh loans is apt to arise. On the other hand, a very short period may cause heavy burden on the tax-payer, and thus may cause opposition or even revolt. Secondly, it must be ensured that the administrator does not "raid" the fund. There is always a possibility that the fund is used for purposes other than what it is meant for. This must be avoided. Thirdly, sinking fund should be so constituted that the amount available can be used for repaying those loans, repayment of which proves most advantageous.

It is not necessary that sinking fund should conform to all the above three requirements. For instance, a cumulative sinking fund is helpful in making the period of repayment short, but it provides a great attraction to the administrator to raid it even for minor needs. Attached sinking fund achieves both these ends, but then the sums available cannot be used in the most advantageous manner.

2. *Capital levy.* The method of capital levy for paying off the heavy debt created by war was the subject of wide discussion after the First Great War. It was suggested that a highly progressive tax should be levied on property and wealth to repay the war debt in one stroke. The proposal included taxation of bank balances also, but a minimum of property as well as of bank balance was to be exempted from the levy.

Many arguments were advanced in support of the proposal. It was said that the debt carried an interest burden, which encumbered a sizable proportion of the public revenue and consequently introduced in-

elasticity in fiscal policy. It was pointed out that the debt was contracted in a period of high prices as well as high rates of interest, so that real burden of interest payments would increase with a fall in prices and the burden of the principal would increase with a fall in interest rates. Hence it was in public interest to repay the debt immediately after the war. It was also argued that during the war the poor had fought and suffered, while the rich had amassed huge fortunes. The latter could be made to bear their share of the burden of war by the capital levy. Further, it was pointed out that by making the levy progressive, it could be made to avoid adverse distributive implications. The holders of war securities were generally the rich people, and the capital levy would fall on these very people. The rich would pay and the rich would receive, so that the levy would not enhance inequalities of distribution of wealth. Lastly, it was held that a sinking fund could not be an appropriate method for repayment of war debt as it would spread it over a needlessly long period. Capital levy was considered the only correct method.

Those who opposed the levy argued that the levy would mean too heavy a tax. As strong and influential classes would be taxed, there was a possibility of a civil war. Secondly, it was argued that once levied, there could not be any guarantee that the government would not again resort to the heavy impost on every small pretext. And lastly it was said that a capital levy discriminates against the thrifty: it is a punishment for those who saved, while those who squandered away their large incomes go scotfree.

Index of burden of public debt. Some people have attempted to measure the burden of public debt by the ratio which this debt bears to the annual national income. Such a measure has very little significance. Burden of the debt can significantly be measured in two ways. First, we may calculate the ratio which it bears to public revenue. For instance, if public debt bears to the annual public revenue a ratio of 20 : 1, then we know that if 25 per cent of the revenue is directed towards repayment of debt, it will take eighty years to pay it off completely. This is, of course, on the assumption that public revenue remains the same through these long years. Another significant index is the ratio of external debt to national income. Such an index would give an idea of how long it would take to pay off the external debt if a given drain is allowed on the national income every year. For example, if external debt bears to national income a ratio of 2 : 5 then, if 5 per cent of the national income is utilised for this purpose every year, it will take eight years to clear off the foreign obligation.

Postponing the burden to posterity. Periods of war and planning are periods of heavy government expenditure. If war is won or if plans are carried to their successful conclusion, benefits accrue not only to the present generation but also to posterity. It is, therefore, rightly argued that burdens of such heavy expenditures should at least partly be borne by posterity. It is said that this can be achieved by financing parts of such expenditures by loans.

Now, let us take the case of a war and let us assume, for simplicity, that the economy is divided into two sectors, the war sector and the civilian sector. Also assume that all goods, which enter the war sector, are destroyed. In Fig. 41.2, circle G_1 represents goods and services available in the current year (year I), and circle G_2 represents goods and services available to a future generation in a future year (year II). W is the amount of goods and services for war. The problem is that W should come out of G_2 and not G_1 .

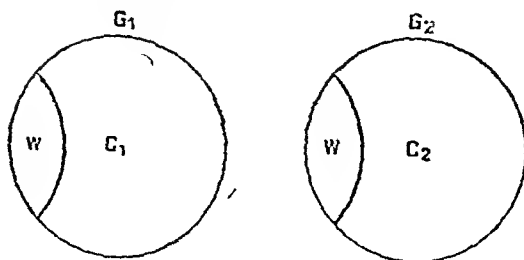


Fig. 41.2

If an internal loan is floated, W goes to war sector and only C_1 is left for the civilian sector in year I. In year II, W is paid by the future generation to that very generation through, of course, the government. Goods available to the future generation remain W plus C_2 , i.e. G_2 .

Now suppose an external loan is floated. Goods and services to the extent of W come from outside. The aggregate with the present generation becomes $G_1 + W$. W goes to the war sector and G_1 is left with the civilian sector. In year II, W is paid out of G_2 , i.e. C_2 remains for the future generation. The burden has been shifted to posterity. The present generation of this country has received goods from the present generation of the foreign country. The future generation of this country will pay to the future generation of the foreign country. Through the foreign country, thus, goods and services have reached this generation from the future generation.

Hence if the purpose is to pass the burden of some expenditure on to posterity, this can be achieved only by financing the expenditure by external borrowing. Internal loans cannot fulfil this purpose.

DEFICIT FINANCE

Meaning. Deficit finance means financing a deficit in the budget. Here the term "deficit" refers to the excess of public expenditure over public revenue. Public expenditure includes current expenditure, capital expenditure, and loans repaid and advances made to the public. Public revenue includes receipts from taxes and borrowings from the public. Thus:

$$\text{Budget deficit} = \left\{ \begin{array}{l} \text{Total Expenditure} \\ + \\ \text{Loans repaid and} \\ \text{advances made to} \\ \text{the public} \end{array} \right\} \text{ minus } \left\{ \begin{array}{l} \text{Tax Revenue} \\ + \\ \text{Loans and deposits} \\ \text{from the public.} \end{array} \right.$$

The deficit in the budget is covered out of balances accumulated in the past or by borrowing from the Central Bank of the country. Thus deficit refers to that part of public expenditure which is financed by accumulated balances or by loans from the Central Bank. It will be noted that whereas expenditure financed by loans from the Central Bank is included in deficit finance, the same financed by loans from the public is not included. It is because loans from the Central Bank increase aggregate expenditure of the economy, as well as money supply with the public, but loans from the public do not produce such effects. This may be explained as follows.

'We know that in case public expenditure exceeds *tax revenue*, the public authority fills the gap by borrowing. It may borrow from the Central Bank, or from the commercial banks, or from the general public.

(i) Suppose the public authority borrows from the Central Bank. In this case the loan expenditure increases aggregate expenditure by an equal amount. It also increases cash holding of the public. A part of the additional cash finds its way into the banks, which can create credit against it so that increase in money supply with the public exceeds the deficit financed by loans from the Central Bank. However, the point to be noted is that borrowing from the Central Bank increases aggregate expenditure as well as cash holding of the public.

(ii) Suppose the public authority borrows from commercial banks. Commercial banks may create credit to finance the loans. As the government spends the bank deposits thus acquired, money supply with the public will increase. Also, this expenditure by the government will increase aggregate expenditure.

But, after all, commercial banks have a limited capacity to create credits. If they lend more to the government, they can lend less to the people. Thus whereas there is a possibility of some increase sometimes in the aggregate expenditure of the economy as well as in the liquidity holdings of the public as a result of loans from the commercial banks, this possibility is limited. We can easily neglect this possibility and safely assume that public borrowings from commercial banks do not increase aggregate expenditure of the economy, nor do they increase cash holding of the public.

(iii) Suppose the public authority borrows from the general public. Individuals and firms may cut consumption expenditure or investments to purchase securities. Or, they may finance these purchases from idle hoards. The former is only a diversion of expenditure, therefore public expenditure financed by such loans does not increase aggregate expenditure. The latter course activates idle money and increases aggregate expenditure. But the extent to which purchases of securities are financed from idle hoards is, as a rule, limited. Hence we may safely assume here also that when loans are raised from the public, the loan expenditure neither increases aggregate expenditure of the economy nor increases active cash with the public.

Thus we find that though the excess of public expenditure over tax revenue may be covered either by loans from the public and the commercial banks or by borrowing from the Central Bank, it is the latter alone which increases aggregate expenditure of the economy as well as cash holding of the public. It may also be noted that both current and capital expenditure, including loans repaid and advances made to the public, influence aggregate expenditure. It is in the light of these conclusions that we must appreciate the concept. Deficit finance is that part of public expenditure which makes a *net* addition to aggregate expenditure and which increases money supply with the public.

Significance of deficit finance. This definition of deficit finance has been accepted by the Planning Commission of India. And this is the definition which is appropriate in the context of the situation prevailing in underdeveloped countries. It is of great economic significance and provides a good guide for fiscal policy. This is clear from the following facts.

(a) In underdeveloped economies, private investment is hindered by many factors, like the absence of a well organised capital market, shortage of experienced entrepreneurs, fear of competition from abroad, etc. etc. Also, the governments of these areas cannot raise sufficient tax revenue for purposes of economic development on account of underdeveloped tax and accounting systems and inadequate administrative machinery. Loans from the public do not come to much because of the inclination of the people to use their savings for purchasing gold and land. The conclusion drawn from these facts is that, rather than let the economy stagnate at low levels of income, it is better to accelerate the pace of economic development with the aid of deficit finance, even though it may cause some inflation. Thus if resources obtained by deficit finance are utilised for capital formation, then deficit finance becomes an important instrument in economic development of the country.

(b) Taxes, loans from the public, and deficit finance are the three methods of diverting resources from private use to public use. Taxes are compulsory but, as they are consciously paid, they are apt to be resisted. Loans are optional, therefore they may or may not be given. Deficit finance eliminates both these difficulties. It gives rise to a kind of compulsory payments, unconsciously made. Thus deficit finance is a measure of the resources diverted from private use to public use *in an invisible way*.

(c) Deficit finance measures increase in aggregate expenditure caused directly by fiscal operations. It increases aggregate expenditure indirectly also. It increases cash holding of the public and of the banking system. Higher liquidity increases propensity to consume, therefore consumption expenditure increases. Also, higher liquidity lowers the rate of interest and thus investment increases. In both these ways deficit finance indirectly increases aggregate expenditure. This additional expenditure releases forces which may produce inflation. Thus deficit finance is a measure of the inflationary pressures caused by fiscal policy.

Private and public deficit finance. A public authority is said to resort to deficit finance when it covers its budget deficit by drawing on accumulated balances or by borrowing from the Central Bank. Quite similarly, if a private firm spends more than its receipts from business plus its borrowings from other firms or individuals, and then covers the deficit by borrowing from some commercial bank, it is said to resort to deficit finance.⁴ Thus deficit finance of a public authority consists in covering the deficit in its budget (in the main) by borrowing from the Central Bank, and deficit finance of a private firm consists in covering the deficit in its budget by borrowing from a commercial bank. Both find the source of finance in their respective bankers. Still there are important differences between private deficit finance and public deficit finance.

1. *Increase in money supply to the public.* When private firms resort to deficit finance, bank lending increases. More deposits are created so that the amount of bank money held by the public increases. When a public authority resorts to deficit finance, state money held by the public increases. A part of this money finds its way into the vaults of commercial banks. Their liquidity ratio having risen they find themselves in a position to increase credit deposits. As we know, the amount of credit deposits, which can be created against a given amount of liquid assets is much greater than the liquid assets.⁵ In other words, a given amount of deficit finance by private firms increases the money holding of the public by an equal amount, but a given amount of deficit finance by public authorities increases the money holding of the public by a much larger amount.

2. *Liquidation of money supply.* Generally a commercial bank advances a loan to a private firm against the security of a collateral. In case the business project of the firm is successful, the loan is easy to pay back. If, however, the project fails, the bank can still liquidate the credit by the sale of the collateral. Hence private deficit finance provides a self-liquidating mechanism. The position of the government is different. No doubt, if it borrows for productive projects which prove successful, the credit may liquidate itself. But if the projects fail or if the borrowing is for unproductive purposes, liquidation of the credit is well-nigh impossible. For the government borrows against its own securities. It has no obligation to repay the loan. The Central Bank, on the other hand, cannot sell away the securities. In the first place, it may not find enough buyers. And, secondly, it is a function of the Central Bank to ensure stability in the market for securities. If it unloads large amounts of them in the market, security prices will fall heavily. This will violently hurt the credit of the government and the Central Bank will have failed in its duty.

4 Logically speaking, if a firm covers its deficit from hoarded money, it is a case of deficit finance. But such deficit financing is rather small and may, therefore, be assumed away.

5 Obviously the position will be no different if the public authority makes payments not in cash but by drawing cheques on the Central Bank. Such operations will increase bankers' deposits and will, once again, strengthen liquidity position of the banks.

3. *Nature of projects.* Banks lend to private firms only for productive projects. As investment in these projects is followed by an increase in the flow of output, additional money gets absorbed. Rise in prices does not persist even if additional money is not withdrawn. On the contrary, many projects of public authorities, even when they are meant to promote economic development, do not produce saleable goods. As the flow of saleable output does not increase on account of these projects, rise in prices resulting from such expenditures persists on.

4. *Delay and wastes involved.* Government machinery is red-tape ridden. It is, as a rule, slow moving and wasteful. Hence even in productive projects of public authorities, lag between making of investment and flow of output is longer. Also, the quantity of output is usually smaller than it would be if private enterprise undertook the same projects. For these reasons, the extent of rise in prices and the possibility of persistence of this rise are greater in the case of public deficit finance than in the case of private deficit finance.

Thus we find that public deficit finance releases more money than its own size. It is not self-liquidating. And it is associated with a slow and small increase in output. For all these reasons deficit financing by public authorities carries with it a much greater inflationary potential than deficit financing by private firms.

Economics of deficit finance. Deficit finance has usually been resorted to by governments in periods of war. In such periods proceeds of taxation and borrowing from the public prove too inadequate for the vast requirements of waging a war. Governments have generally been able to secure command over large quantities of resources by deficit finance. A question is asked: why should underdeveloped economies not employ deficit finance for procuring resources for purposes of economic development? Deficit finance should ensure faster development than is possible with the help of taxation and borrowing from the public.

A possible objection is that capital formation by deficit finance cannot sustain itself, because deficit financing produces inflation and inflation eats away more than it creates. Inflation causes flight of capital as well as capital consumption. Hence even if some capital is created by deficit finance in the initial stages, ultimately more will be lost than gained.

The basic assumption underlying the above argument is that deficit finance will always produce inflation. This is incorrect. No doubt, deficit finance carries with it inflationary potential, but it may or may not produce actual inflation. Let us study the question in some further detail.

Suppose the government of a country resorts to deficit finance for purposes of war. This means increasing unproductive expenditure and financing it by borrowing from the Central Bank. As increased public expenditure competes with private expenditure, price level rises. Private sector can purchase less goods: there is forced saving. It is the immediate rise in prices which brings about forced saving, i.e. which,

makes it possible to divert resources from private sector to public sector. Also, additional government expenditure increases money supply with the public, but it is not accompanied, nor followed, by an increase in aggregate output. Consequently, the rise in prices persists. Money incomes of the people rise, but real incomes do not. And as there are no additional goods produced, money once issued cannot be mopped up except by taxation.

Now suppose that the government undertakes an investment project and finances it by borrowing from the Central Bank. Once again, as the increased government expenditure competes with private expenditure, price level rises. There is forced saving and resources are diverted from private sector to public sector. However, in due course of time the project is completed and aggregate output increases. Additional money is partly mopped up. The rest of it is absorbed in the system because the increase in the flow of output not only helps to mop up some money, but also increases the demand for money. Prices fall back. Ultimately, there is an increase in real incomes. This rise in real incomes raises people's ability to save, and there is more voluntary saving. Thus while the start is made with forced saving, ultimately scope is created for voluntary savings. This is how the beneficent spiral of economic development may get initiated.

It must be noted that the above two cases resemble each other in some respects and differ from each other in some other respects. In both cases the immediate effect is a rise in prices. In both cases investment precedes the matching saving, and in both cases there is forced saving. Lastly, in both cases resources are transferred from private sector to public sector by a rise in prices.

The difference arises in three respects. First, in the case of war expenditure rise in prices persists and, unless some special measures are adopted to mop up additional money, inflation is most likely to ensue. On the other hand, in the case of productive developmental expenditure, forces are released which bring down the price level. So far as such forces are expected to be effective, inflation need not be feared. Secondly, war expenditure increases money supply with the public which is not self-liquidating and, hence, can be mopped up only by taxation or borrowing. Productive developmental expenditure also increases money supply with the public, but this supply of money is self-liquidating. Increase in the flow of goods does the job. And, lastly, war expenditure leads to forced saving only, whereas productive developmental expenditure gives rise to forced saving in the initial stages only; ultimately it creates scope for voluntary saving. In one word, in both cases investment precedes saving as well as increase in output, but whereas in one case saving and output do not respond, in the other they do.

Between war expenditure and productive developmental expenditure lies another unique category, namely unproductive developmental expenditure. Examples of it are expenditure on education and health and on construction of roads and canals. Either such expenditures do not result in production of saleable goods, or the prices

charged on output (as in the case of water rates) may not adequately mop up the additional money supply. It appears that such expenditures must prove inflationary. But it is not necessarily so.

Unproductive developmental expenditure, like war expenditure, raises prices and increases money incomes. This benefits capitalists in two ways. Their profits increase, therefore they can invest more. Secondly, the rise in prices serves as an inducement to invest. Thus there is a greater ability as well as willingness to invest. But there are hurdles in the way of making a larger investment in an underdeveloped country. Of course, there is no shortage of unskilled labour, but there is a shortage of complementary factors, especially skill, raw materials, machinery and power. Now, in periods of war these factors remain what they are, therefore increase of investment to increase output is hindered. But unproductive developmental expenditure is incurred just to provide some of these non-available complementary factors. If it is the absence of these very factors which is creating bottlenecks, then further investments and increase of output are made possible by such expenditures. In other words, though unproductive developmental expenditure does not increase output directly, yet it may indirectly be helpful in increasing investment and output and thus may not prove inflationary.

There is an important school of thought—Professor Shenoy is a vociferous member of it—who believe that the extent to which deficit financing can be used for development is rather limited. They argue that deficit finance always leads to a rise in prices. The resultant increase in output takes long to materialise. In the intervening period wages and other money incomes rise. When the new output emerges, it produces its own counterpart of incomes. Thus prices do not fall back even when the output increases.

Even these economists concede that there are circumstances in which deficit financing may be resorted to without inflation. First, when the Central Bank of the country holds large foreign exchange balances and there is an import surplus. The government can then easily have deficits in the budget. The additional money supplied to the public is mopped up by the sale of foreign exchange to the public. Thus payments deficit and budget deficit cancel each other in respect of money supply to the public. Secondly, if a large sector of the economy is non-monetised, then as development proceeds the monetised sector expands and the demand for money increases. This is what enables the government to resort to deficit financing without inflation. Evidently, the extent to which deficit financing can be resorted to, in this case, is limited by the pace of monetisation of the non-monetised sector.

The conclusion is that deficit financing can be employed for the purpose of economic development. Most economists agree that it is possible to make use of this method for this purpose without producing inflation. They also agree that it ought to be used only to such an extent that it does not prove inflationary. There is, however, a

disagreement on how far deficit financing can be carried without producing inflation.

Limits to deficit financing. We have arrived at the conclusion that deficit financing must be employed for purposes of economic development only to the extent that it does not produce inflation. Thus the limit to the use of deficit financing is set by possibilities of inflation. We, therefore, now propose to study the circumstances in which deficit financing will prove inflationary.

Deficit financing directly increases aggregate expenditure, in the first instance. Then it increases money supply with the public. Increase in money supply increases propensity to consume of the people, therefore consumption expenditure increases. Increase in money supply also lowers the rate of interest, therefore investment expenditure increases. For both these reasons, aggregate expenditure persists at the higher level. If deficit financing is continued, it continues to increase expenditure. The result is inflation which goes on gaining momentum till it assumes the form of run-away inflation. Tendency to inflation will be curbed only if additional money is either mopped up or is made ineffective. Hence all those factors, which help either to mop up or to make ineffective additional money supply, purge deficit financing of its inflationary effect. In the light of this basic formula we can easily enumerate the factors which set limit to deficit finance.

1. *Inflationary potential.* The first factor is the inflationary potential of the expenditure undertaken. It is another name for the proportion which deficit expenditure forms of the national income (or national output). In case this proportion is high, there will be a large initial rise in prices as well as a large increase in money supply with the public. Mopping up additional money or making it ineffective will become comparatively difficult. Thus the size of national income sets a limit on deficit finance. Deficit finance should form a small proportion of the national income.

2. *Nature of expenditure.* Importance of the nature of expenditure undertaken can be viewed from three points of view:

- (i) One relevant distinction is between productive expenditure and unproductive expenditure. Productive expenditure directly increases the flow of national output. Additional money is partly liquidated and partly absorbed in the economic system. Thus in this case there may be an initial rise in the price level, but ultimately prices fall back.

In respect of unproductive expenditure, all depends on whether there is unemployed labour and also whether factors complementary to labour are available or not. When such expenditure is incurred, prices and profits rise and producers are inclined to increase their investments. If labour and other complementary factors are available, aggregate investment will actually increase and with it will increase the flow of output. Ultimately prices will fall back and inflationary potential

will be curbed. This is what may happen during periods of depression in advanced countries.

In underdeveloped countries unproductive expenditure generally fails to increase output because, though labour is available, complementary factors are not available. Evidently then if the unproductive expenditure provides these complementary factors, national output may ultimately increase. This is the justification for deficit expenditures on health, education, roads, canals etc.

(ii) A distinction may be made between expenditures which increase national output with a short time-lag and those where the time-lag is long. In the latter, tendencies to inflation are stronger. For when the initial rise in the prices persists for some time, workers press for higher wages and ultimately succeed in their efforts. Once wages rise, it becomes difficult to lower them, and costs and prices do not fall back. Hence expenditures with a longer time-lag are more likely to be inflationary than those with a shorter time-lag.

(iii) Deficit expenditures must also be distinguished on the basis whether they mainly increase wages or profits. Wage earners have a high marginal propensity to consume. Hence a large part of expenditure going to wages will be further spent on consumer goods. If, as generally happens, the output of consumer goods does not increase sufficiently and fast, deficit finance proves inflationary. On the other hand, if a large part of public expenditure goes to increase profits, the new incomes will be largely saved. These savings are either invested in which case they increase output, or they are hoarded and constitute a leakage from the flow of money. In both these ways savings help to curb inflationary tendencies.

3. *Mopping up additional money.* There are many methods of mopping up the additional money supply created by deficit finance. As we have already noted, additional output which may result from deficit expenditure is one source. Another source is taxation. How far taxation can be increased depends on taxation already in existence, efficiency of administrative machinery, and the kind of economy. The last factor is very important. For instance, in underdeveloped countries it becomes difficult to mop up by taxation that part of additional money supply which percolates into the rural sector.

Holdings of foreign exchange by the Central Bank of the country can help to mop up the additional money. For the additional money can be withdrawn by selling foreign exchange to those dealers who have to make payments to foreigners. Of course, it is assumed that the balance of payments is unfavourable, which is usually the case with an underdeveloped country which is adopting active measures to bring about economic advancement.

Stocks of goods held by dealers is also an important factor. If there are large stocks, additional public expenditure as well as increase of money supply activate these stocks, i.e. there starts the process of fast

depletion and replenishment of stocks and the additional money is absorbed.

4. *Sterilisation of additional money.* Inflationary potential of deficit financing can be made ineffective by sterilising the additional money. One method of doing so is physical controls, *i.e.* price controls and rationing. In that case, as goods can be purchased only in limited quantities and at fixed prices, additional money lies with the people unspent. Some additional money can be sterilised by raising the reserve ratio of banks as well as by imposing restrictions on rediscounting and thereby restricting lending by banks. Such measures result in large quantities of money lying idle in the vaults of the banks.

Exemptions or reductions of taxes on savings induce people to save more. Then these savings are either invested or hoarded, so that inflationary tendencies are curbed. Lastly, the additional money supply may be absorbed in the system without raising the price level if measures are under way as a result of which monetised area of the economy is extending.

SOURCES OF REVENUE AND OBJECTIVES OF FISCAL POLICY

Now we are in a position to say how far the different sources of revenue—taxation, loans from the public, and deficit finance—are appropriate to the achievement of various objectives of fiscal policy. Before we come to consider the case of each objective separately, we would do well to take note of a few basic facts. First, it is universally agreed that taxation must provide revenue for meeting normal administrative expenditure. If cost of administration is met by deficit finance, it will produce terrible inflation. Similarly, if it is met by borrowing, large deadweight debt will be created which will bind future revenues and introduce an element of inelasticity in fiscal policy. Moreover, large debt is bound to destroy the credit of the government. Another fact to note is that every new tax or the raising of an old tax is, as a rule, protested against, if not resisted. In democratic countries, where governments rest on popular vote, such protests cannot be completely ignored. In other words, in addition to economic limitations on taxation, there are political limitations. Thirdly, we may note that public loans are, as a rule, voluntary. No doubt public authorities generally have good credit in the market and can borrow large sums, still they may not be able to raise as much by loans as is needed just because loans are voluntary. Lastly, we must remember that deficit finance is a quiet inroad on the purses of the people. It is concealed taxation which is collected from the people without touching their pockets. It is a process which places resources at the command of the government without any protests. At least so it happens upto a limit. But the chief argument against deficit finance is its inflationary potential. So long as the government can use deficit finance without causing inflation, the main objections against this source of revenue remain invalid. Now let us consider the case of each objective of fiscal policy.

1. *Economic development.* The primary requirement of an underdeveloped economy is larger aggregate saving and investment. Taxation is an ideal method for this purpose. In an underdeveloped economy marginal propensity to consume of the people is high, therefore additional money raised by increasing taxes comes mainly from consumption expenditure. In other words, tax-revenue raised for productive developmental expenditure increases aggregate saving and investment. It must, however, be noted that if taxation is to perform the function of increasing aggregate saving, a sizable proportion of it must fall on the working classes, because it is in their case that marginal propensity to consume is high. If heavy taxes fall on the producers, it will mostly be a case of converting private saving into public saving : aggregate saving will not increase.

There are, nevertheless, limits beyond which taxation cannot be increased. First, beyond a stage higher taxation will adversely affect the peoples' will to work. Secondly, a limit is set by the peoples' capacity to pay, because after all there is a point below which consumption cannot be reduced any further. These two factors constitute economic limitations on extension of taxation. In addition, there is the political limitation, *viz.* the fear that higher taxation may give the opposition parties a handle for persuading the people to throw the ruling party out of power.

Loans from the people will increase aggregate investment if loans come out of hoards, but there is no recognised method by which the government can ensure this. Generally, increase of public investment by loans becomes a case of transforming private investment into public investment, so that aggregate investment does not increase. Nevertheless, in an underdeveloped country there is an imperative need for making public investment for education, health, canals, roads, provision of cheap power, and all such basic and key industries which private enterprise will not undertake. The state must undertake responsibility for such projects, even if these have to be financed by loans from the people. In one word, private investment will not necessarily make a start at the most appropriate end. Transformation of private investment into public investment can ensure that first things are done first.

The case of external loans stands on a different footing from that of internal loans. At the time of repayment, external loans cause a drain on national income and may give rise to foreign exchange difficulties. But economic development, at least in its initial stages, is accompanied by adverse balance of payments. Unless the country concerned has accumulated large reserves of foreign exchange which is rather rare, it becomes necessary to invite foreign loans and investments to solve the problem of balance of payments. This is a problem which internal loans or taxes cannot solve : only external loans can do the trick.

Taxes and loans prove insufficient for financing public investments which are essential for ensuring fast economic development. Deficit financing becomes unavoidable. Deficit financing immediately creates

forced savings, and ultimately creates a scope for increased voluntary savings by increasing national output. But it carries in its lap the danger of inflation which can be avoided, and must be avoided, by careful planning. Deficit expenditure should not form a large proportion of national income. Not only should it induce larger production, also it must achieve this with a short time-lag. Thus there is a strong case for the use of deficit finance for projects which directly produce saleable goods, or which indirectly help their increase by providing factors complementary to labour. Moreover, deficit financing is of special help in an economy of which the monetised sector is extending.

2. *War finance.* Taxes are the best method of financing the requirements of a war. They are neither inflationary, nor do they bind future revenues of the government. And if the tax system is properly planned, more burden can be made to fall on those who make large profits from war projects or who are otherwise in a better position to bear the burden.

Loans are the next best method for war finance. They neither induce any opposition nor are they inflationary. The difficulty with them, however, is that they are voluntary and, therefore, may not be forthcoming in requisite amounts. Also, they leave behind deadweight debt which binds future revenues and introduces an element of inelasticity in fiscal policy. Moreover, such debts are contracted in a period of high interest rates as well as high prices. Later on, as interest rates and prices fall, the burden of their interest as well as of principal becomes heavier.

External deadweight debt has all the above merits and demerits. It has the additional demerit of causing a drain in future on national income. And its peculiar merit is that it is the only method of shifting some burden of war expenditure to posterity.

When a country is engaged in a war, waging the war to a successful conclusion becomes the supreme goal. Resources for the purpose must be found, by whatever means. As modern wars are very expensive, adequate resources cannot be procured by taxation and borrowing from the public. The government is compelled to take resort to deficit finance. It may be said that as deficit finance is, after all, concealed taxation, then why not tax incomes directly? The answer is that it is not possible to do so for political reasons. There is always a fear that increase in taxation beyond a limit will make the government unpopular. On economic grounds we cannot justify deficit financing of war expenditure. Deficit finance undertaken on any sizable scale for this purpose will cause inflation because the expenditure incurred is such as does not increase supply of goods to the people. The conclusion is that deficit financing of war expenditure must be avoided as far as possible. Even when resorted to, it must be kept at its minimum.

3. *Stability in employment and production.* In periods of boom the aim of fiscal policy is to reduce aggregate expenditure. It can achieve

this aim by producing surplus budgets. Not only should public expenditure be reduced, also private expenditure should be influenced by mopping up purchasing power. Taxes and loans are the two methods of bringing about a reduction in private expenditure. It is self-evident that deficit financing has no place in such a situation, because the aim is to reduce expenditure and have surplus budgets, and not to increase expenditure and have deficit budgets.

Two points deserve to be noticed here. First, loans from the people will help to reduce private expenditure only if the loans are not advanced from hoards. Second, in a period of rising prices, taxes imposed on goods which have an inelastic demand prove inflationary rather than disinflationary. In other words, all taxes are not disinflationary, therefore taxes imposed for the purpose must be selected carefully.

In periods of depression the aim is to increase aggregate expenditure. The relevant policy is to increase public expenditure in such a manner that incomes are created for those sections of the community whose marginal propensity to consume is high. But how to finance the additional expenditure? Taxes and loans cannot do the job unless money for them comes from hoards. For, otherwise increase in public expenditure will be offset by a fall in private expenditure, and aggregate expenditure will not increase. The appropriate course is to have deficit budgets, and finance deficits from accumulated balances or by borrowing from the Central Bank. Thus deficit finance has a very vital role to play in periods of depression.

It must, however, be noted that deficit finance will help reduce unemployment if not only labour but also factors complementary to it are lying idle. In case complementary factors are not available, deficit financing will help to increase employment only if the additional expenditure undertaken results in an increase of these complementary factors.

4. *Reduction in inequalities of incomes and wealth.* Taxes are the best fiscal weapon for reducing inequalities of incomes and wealth. Direct taxes can serve this end when they are made progressive. As every upper slab of income or wealth is taxed at a higher rate than the lower ones, rich people pay in higher proportions than the poor. Indirect taxes can help to reduce inequalities if the commodities taxed are such as are mainly consumed by rich people.

Loans cannot be used for reducing inequalities. It may be said that if loans are made compulsory for the rich, they will be as good as progressive taxes. But it must not be forgotten that loans are to be repaid with interest. Compulsory loans may temporarily reduce purchasing power of the rich people, but they cannot produce permanent effects of the desired variety.

Can deficit financing help to reduce inequalities? Can we not, for example, create incomes for the poor people by deficit expenditure?

The answer is, no ! Deficit financing leads to a rise in prices and every rise in prices adversely affects working classes. Thus those very classes are hard hit which are desired to be helped. Moreover, deficit financing is too dangerous a weapon to be used lightly. If the rise in prices caused by it develops into inflation, the whole economy suffers a set-back.

5. *Balance of payments.* Fiscal policy can help to correct adverse balance of payments either by taxing imports, or by subsidising exports, or both. Taxes on imports have their limitations. We may reduce the imports of luxuries, but if the country depends on other countries for food, its imports cannot be reduced for obvious reasons. Similarly, imports of raw materials and machinery cannot be cut, otherwise exports may suffer and then the very purpose will be defeated.

If subsidies are preferred to import duties, a difficulty arises in respect of finding money for the purpose. Additional taxes for this purpose will benefit rich producers and exporters at the cost of the poor masses. Moreover, taxes levied for the benefit of a section may cause political reactions. Public loans also cannot be used for this purpose because that will increase deadweight debt.

It appears that the best course is to use both the methods together. Taxes on imports will then be kept within limits, and they will not only reduce imports, but will also provide revenue for giving subsidies.

6. *Encouragement or discouragement of individual industries.* Taxes on the production and sale of the product of an industry discourage that industry : subsidies encourage it. The question of encouraging or discouraging a particular industry is decided on the basis of two considerations.

1. One is the *net* gain or loss of consumers' surplus. We have already studied this question in chapter VII. Our conclusions were as follows :

(a) If increasing costs are operating in the industry, a tax on its production or sale will raise the price by less than the tax *per* unit. If the cost curve is rising sufficiently steeply, loss of consumers' surplus will be less than the revenue accruing to the government.

A subsidy to such an industry will lower the price by less than the subsidy *per* unit. Gain in consumers' surplus will be less than the money paid as subsidy.

(b) In case decreasing costs are operating in the industry, a tax will raise the price by more than the tax *per* unit. Loss of consumers' surplus will be more than the revenue accruing to the government.

On the other hand, a subsidy to such an industry will lower the price by more than the subsidy *per* unit. Gain in consumers' surplus will be more than the payment made by the government.

On this basis, the conclusion is that taxes must be imposed on industries subject to increasing costs, and subsidies given to industries subject to decreasing costs.

1. The other consideration is whether the industry concerned is using more or less resources than the public interest demands. We have already discussed this question in chapter XIII. We concluded there that when an industry is subject to decreasing costs (increasing returns), public interest demands that more resources should be diverted towards the industry by a subsidy: but if the industry is subject to increasing costs (diminishing returns), public interest would not be served by diverting resources away from that industry by taxation.

Thus both considerations point towards the conclusion that industries subject to decreasing costs should be encouraged by subsidies. And only one of the considerations brings us to the conclusion that industries subject to increasing costs should be taxed.

Financing subsidies by loans will increase deadweight debt. Nor can deficit financing be used for the purpose because that will lead to inflation. Hence it is best to finance subsidies given to deserving industries by tax revenue. Taxes imposed on industries subject to increasing costs will not only provide revenue for subsidies where they are to be given, but also are likely to increase aggregate consumers' surplus and, hence, economic welfare.

Further Readings:

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CHAPTER XXXXII

THEORY OF PLANNING

WHAT IS PLANNING

Interference is as old as governments. Ever since the system of governments and ruled people came into existence, there has been some interference in economic activities of the people by the ruling authority. Sometimes this interference has come for personal benefit of the rulers (taxing the people for the rulers' purse). In some cases the object has been to secure revenues for the welfare of the ruled class or a section thereof. In the later stages of capitalism, interference by the government has often been actuated by a desire to rectify the wrongs of the capitalist system, such as periodic unemployment in labour and capital markets, exploitation of consumers by big monopolies, inequalities of incomes, appalling and inhuman labour conditions, etc. etc. All these have, however, meant government interference in a piecemeal fashion. Even when it aimed at undoing the wrongs of the economic system, it attempted to do so without changing the basic structure and working of the prevailing economic order itself. Moreover, these activities have generally lacked cohesion and co-ordination.

Meaning of planning. Mere interference with the working of free enterprise and price mechanism is not planning. Planning implies setting the pattern of future economic development as well as making a conscious and continuous effort for the attainment of this pattern. It involves not only defining a system of objectives in respect of economic growth but also formulating methods for the achievement of these objectives. It means much more than casual, occasional and sporadic touches to some aspects of economic activity¹. It means a rational control of economic forces with a view to integrating efforts towards growth of the whole system. Its purpose is to ensure that processes of production, consumption, and distribution are carried out in accordance with schedules carefully drawn up in advance. Planning, therefore, involves fixation of certain targets of production and other achievements for the country as a whole, and their co-ordination with a distribution plan and the consumption schedules. Execution of plans inevitably necessitates governmental control in a large measure.

Planned and unplanned economy. Difference between a planned and a free economy² is not that one is characterised by order and the other by chaos. Each has an order of its own. In a free economy order is brought about by price mechanism operating in conjunction

1 "Planning...is thus different from the traditional hit-and-miss methods by which 'reforms' and 'reconstruction' are often undertaken."—*First Five Year Plan*, pp. 7-8.

2 We use the phrase "free economy" for an economy without planning.

with profit motive. A planned economy, on the other hand, is given its order by the Central Planning Authority, which directs it so as to achieve defined social purposes. Price mechanism may be used as a tool, along with other tools, i.e. it may not be completely replaced by direction. Even the operation of profit motive may not be completely eliminated, but it must yield place of precedence to social purpose, i.e. the benefit and advancement of society, as a whole. True, that society is composed of individuals, but individuals may have conflicting interests. While in a free economy individuals are free to follow their conflicting interests, in a planned economy a social harmony is imparted to individual actions.

Thus a planned economy may be completely regulated or partially regulated. In a completely regulated economy, price mechanism and profit motive have no place. When, however, it is partially regulated, control is applied at strategic points. Resources are then not directed but diverted into the requisite channels. Price mechanism and profit motive still continue to play a role.

Characteristics of a planned economy. We may now enumerate the characteristics of a planned economy:

1. There is a Central Planning Authority on whom devolves the responsibility of achievement of social objectives. These objectives may be laid down by the Planning Authority itself or by the Parliament. Or, it may be that the social objectives are suggested by the Planning Authority and approved by the Parliament.

2. Social objectives indicate the direction in which the economy is to move. It becomes necessary also to lay down long-term and short-term targets. These targets are determined by the Planning Authority in the light of quantities and qualities of available and potential resources in men and materials. Much also depends on the cooperation expected of the people as also on how far domestic resources can be supplemented by aid, loans, and investments from other countries.

3. The Planning Authority takes deliberate decisions and conscious action for the achievement of the targets. It may undertake direct responsibility for the implementation of some or all of its decisions in respect of targets. Alternatively, it may control strategic points and direct and regulate the rest of the economy. In that case, implementation of many decisions is entrusted to other bodies, but it continues to be responsible for supervision and co-ordination. In any case, it must ensure that changes are occurring in the desired directions and with optimum speed.

GENERAL ARGUMENTS FOR PLANNING

In a free economy, market mechanism, assisted by profit motive, keeps the economy in gear. The "invisible hand" brings about adjustments. But the economy run by market mechanism suffers from some grave defects. There are certain important social

requirements which it does not subserve at all or which it does not subserve satisfactorily. It is these social requirements for the fulfilment of which need for planning arises.

Rapid increase in production. The chief argument for preference of a planned economy over a free economy is that the former ensures a more rapid increase in production. The Planning Authority adopts measures to step up the rate of saving and investment. This may be done by methods of compulsion like taxation and deficit financing, or by methods of incentives like inviting loans on more attractive terms, giving concessions from taxation on investments, etc. etc. The Planning Authority also arranges for measures to explore new resources as well as to improve the quality of human factor by extending facilities for education and health. The Authority may also see to it that wastage of resources, human as well as material, is reduced to the minimum. Planning, thus, ensures speed in capital formation, development of resources, and increase in national income. In this lies the fundamental justification for planning.

Balanced growth. Economic growth, if it is not to be short-lived, must proceed simultaneously in all sectors of the economy. If some industries expand while others remain stagnant, the expanding industries will soon face the problems of limited markets and inadequate supplies of raw materials and intermediate goods. If national income is to be increased permanently, incomes and outputs of various sectors must increase simultaneously, because every industrial group depends for sales as well as supplies on almost every other industrial group. Lopsided development is no development as, sooner or later, it will crack under its own pressure. Planned development can ensure simultaneous development on all fronts. For instance, in India, the five-year plans provide for development of agriculture, industries, as well as transport. They also aim at developing social and economic overheads.

Reduction in inequalities. In a free economy, there are no economic forces at work which tend to bring about distributive justice. There are reasons to believe that free working of an economy tends to increase inequalities. It is possible for a government to reduce inequalities by steps like progressive taxation as well as by appropriate methods of public expenditure. Reduction in inequalities may, however, reduce saving and investment and, hence, national output. The volume of annual savings is, as a rule, greater in an economy where distribution of national income is unequal. As inequalities in incomes are reduced, savings are apt to decline. For the sections which lose incomes now save less, while the poor people whose incomes increase spend away their additional incomes. As a fall in savings impedes economic progress, the state has to step in to keep up the level of savings. The twin aim of reduction in inequalities and increase in investment and output can be achieved only by planning. In fact, the question of reduction in inequalities has a two-way relation with planning. On the one hand, if inequalities are to be reduced, planning becomes essential to keep up investment.

On the other hand, planned development is generally so conceived that backward sections of the community gain and inequalities are reduced.

Location of industries. In a free economy location of various industries is determined by advantages of production on the one hand, and facilities for sales on the other. In other words, left to themselves, industries are guided in their location by cost-price considerations. There are, however, two other factors of great social significance which fail to exert their influence in such an economy. There is, first, the balance between regions. Some regions of the country, for reasons of richer resources or an early start in industrialisation, attract most of the industries, while other regions can attract very few. Consequently there is an uneven regional growth of industries. Such a distribution of industries cuts right across considerations of social justice and is dangerous for the unity of the country. Planned economic development may aim at less uneven distribution of industries among various regions. Reduction of regional inequalities is as much an economic desideratum as reduction of inequalities among individuals or industrial groups.

The second factor is defence. We live in an era in which aerial bombardment is an essential part of warfare. Concentration of industries in some areas, however advantageous it may be economically, is dangerous from the point of view of war-time considerations. Hence industries must be spread over the entire country so that destruction in any area may mean a comparatively small loss. Planning can achieve such a distribution of industries.

Distribution of resources between present and future. The natural resources of a country have to be properly apportioned between present and future needs. Attraction and certainty of immediate gains may lead to over-exploitation of exhaustible resources. For instance, lumbering and exploitation of mineral resources may be proceeding too fast which will prove harmful to the interests of posterity. It is the duty of the state to protect the interests of posterity. Planned development can take into account this important consideration.

Planning and war. Modern wars are expensive as well as all-pervasive; they violently disturb the working of economic machinery. Resources of the country have to be so allocated that production of war materials receives top priority. Also, other needs of the country have to be co-ordinated with war-time requirements. Production of goods for civilian consumption has to be curtailed for releasing resources for war needs. Problems created by reduction in imports and exports have to be faced. Above all, resources have to be developed, if possible, to increase aggregate output. For all these reasons, planning may profitably be resorted to in periods of war.

Planning and fluctuations. It is sometimes argued that a free economy is characterised by recurrence of periods of depressions and booms. Falling prices reduce employment, and rising prices leave wages behind. Thus both hurt the interest of the labouring and the salaried

classes which form the bulk of population in every country. It is held that one purpose of planning is to eliminate or reduce intensity of these fluctuations. But as we have already pointed out, planning is not an occasional interference with the free working of the economy. It is a continuous and conscious effort to bring about economic growth. Anticyclical measures, by themselves, do not constitute planning, though planned development may be given a form in which these fluctuations either do not occur or occur less frequently and less intensely.

SPECIAL NEED FOR PLANNING IN UNDERDEVELOPED AREAS

Speedy development. The basic economic problem, which underdeveloped countries face, is that of lack of proper proportion between labour and capital. Labour is plentiful while the amount of capital available is scarce. It is insufficient to afford gainful employment to the total labour force. Not that most of the people are unemployed in the sense that they have no jobs. The fact is that they are able to get some work within the joint family enterprise which is generally agriculture. But there is not enough work to absorb them whole time. The situation persists on account of absence of alternative avenues of employment and a high rate of population growth.

The problem has not only to be solved, but solved speedily, on humanitarian as well as political grounds. Left to itself, free enterprise will never be able to solve the problem. Moreover, an economy developed on the basis of free enterprise will have all the defects which are so common to advanced economies of the West. Fast development, as well as development without widening regional and group inequalities, is possible only by planning.

Intense sacrifice. The crux of economic advancement is stepping up saving and investment. Fast development requires fast increase in the rate of saving. Incomes and consumption standards being already low in underdeveloped countries, the process of further cutting down consumption is painful and involves a sacrifice. Increase in savings at the desired rate will not come forth voluntarily. When Planning Authority steps in, it decides the rate of growth of saving and investment and ensures that its decisions are implemented.

External economies. Private investment flows into those channels where the expected rate of profit is the highest. Criterion of investment is not social gain but private profit. Many social and economic overheads are unprofitable business for private enterprise. This is especially so in an underdeveloped economy. But while promise of private profit is not encouraging, gain to the community may be very great. When social gains exceed private gains, external economies are said to have been created. Examples of investments, which create external economies, are those in roads, bridges, dams, health centres, etc. Public investment is the only way to create external economies and appropriate atmosphere for further investment. Investment has,

therefore, to be so planned that, in the first instance, it is instrumental in establishing social capital and subsequently takes their advantage by building a superstructure of industry.

There is another variety of external economies which are the result of balanced growth. Investment in some lines may be unprofitable due to smallness of the market, incomes being low and, hence, demand being inelastic after a level. Demand can be raised by creating incomes in other sectors. This necessitates simultaneous investment in a number of industries. Simultaneous growth on a number of fronts is more essential for an underdeveloped area than for an advanced area, because an underdeveloped area has a comparatively less chance of capturing foreign markets. Hence it is planned development which is suitable to the requirements of an underdeveloped area.

OBJECTIVES OF PLANNING

Planning, in the sense of control of economic forces for the achievement of defined social objectives, dates back to 1918, when Russia adopted the New Economic Policy (NEP). Planning in other countries came later, in most cases during and after the Second World War. It has, however, become obvious that, once a country decides to embark upon planned development, planning becomes a continuous process. On its march of economic advancement, a country is apt to encounter hurdles. Diversions are unavoidable at many points on its course. To ensure that diversions do not result in loss of direction, planning must define three kinds of objectives—basic objectives, long-term targets and short-term targets.

Basic objectives. It is universally accepted that ultimate aim of planning is promotion of social welfare. Though the pride of place is given to economic welfare, non-economic social welfare cannot be ignored. In fact, it is realised that the Planning Authority, in its endeavour to effect economic advancement, cannot go very far without changing the social framework. As economic and technical changes are brought about, simultaneous changes in social institutions and social relationships also become necessary. Nevertheless, promotion of economic welfare of the community as a whole is foremost among the basic objectives of planning.

It was pointed out in the first chapter that there are three constituents of economic welfare, *viz.* maximum production, full employment, and social justice or reduction in inequalities of incomes, wealth and opportunities. These are the three basic objectives of economic planning also.

It must be noted that maximum production does not mean increase in production by *any* method. For instance, if production is increased by longer hours of work, it would not be an advancement. In subsequent years output will be low, as the efficiency of workers will be progressively falling. Maximum production must be achieved by an

increase in productive powers. Increase in output of goods and services must be brought about by raising efficiency of the economic system by producing better tools, improving methods, and raising standards of health and education of the workers.

We have noted in the first chapter that the three constituents of economic welfare may not always be compatible. Improvements in techniques of production may aggravate the problem of unemployment. It may even widen inequalities. Conflict between the three desiderata is inevitable in the initial stages of development. It is, therefore, necessary that planning proceeds in terms of well-thought-out priorities. In the long run, however, maximum production and high level of employment go hand in hand. By proper measures, reduction in inequalities may also be achieved.

Long-term targets. It is generally difficult to fix upon targets in respect of employment and reduction in inequalities of incomes. All that can be done is to broadly indicate some steps. In respect of employment, for instance, opening of new units of production as well as expansion of the existing ones, may serve as an index of new avenues of employment. Similarly in respect of inequalities, steps may be taken to provide employment to, and raise the incomes of, backward classes and less developed areas.

Targets of production are easier to fix upon. A period is mentioned in which national income is to be doubled (or trebled). This gives the long-term target in respect of national income. This target is a composite of targets in respect of agricultural production, industrial output, commercial and social services. To decide that national income is to be doubled in a given period is not enough. It must also be decided to what extent the outputs of individual commodities and services are to be increased.

Short-term targets or individual plan targets. Achievement of long-term targets has to be broken up into stages for three reasons. First, the three objectives of maximum production, full employment, and reduction in inequalities may not be compatible in all stages of economic development. It may not be possible to make rapid advance in all these directions simultaneously. It becomes necessary, therefore, to lay down priorities, each set of items receiving a different amount of attention at different stages.

Secondly, the path to attain long-term objectives may be circuitous. For instance, if the purpose is to increase agricultural output, it may be necessary first to put up plants to produce fertilisers, or to construct canals to provide irrigation. Similarly if industrial output is to be increased, it might be considered wise first to increase the output of agricultural and mineral raw materials, of food, and of machinery. It may also be necessary to expand transport facilities. Growth in some fields has to be simultaneous, but there are also some fields where the growth must precede the same in other fields.

Lastly, in every stage of development, there are some problems which demand immediate attention. In the case of India, for instance, when planning started, problems like those of food shortage, high and soaring prices, adverse balance of payments, and rehabilitation of refugees cried for solution. Similarly, as development proceeds, problems of inflationary tendencies, shortage of foreign exchange, demand for higher wages, and transport bottlenecks are bound to arise from time to time.

For these reasons, the achievement of long-term targets is broken up into stages. Each stage generally consists of four to six years; mostly it is five years. For each stage there is a separate plan and each plan has targets of its own. These targets must conform to three tests. First, they must be in conformity with the basic objectives. Secondly, they must also be in keeping with long term-targets. And the third test is that they must be set to meet immediate requirements of the situation.

Planning in India. The basic objectives of planning in India are the same as usual. Maximum production, full employment and attainment of economic equality and social justice, are laid down as the objectives of planning in India.

In deciding long-term targets, the Planning Commission considered the two extremes open to them. One was to go fast. Capital formation must in that case increase fast. Taxation, borrowing, and deficit financing must all be pitched up to a high level. Incomes would then increase fast, but for some time less would be available for consumption. For, on the one hand taxation and borrowing go up and, on the other, production of consumption goods either does not increase or does not increase as fast. Thus fast expansion would cause unbearable suffering. The other extreme of going too slow could not commend itself because it would strike against the very spirit of planning. There is little sense in planning if it does not promote rapid development. Hence wisdom lay in striking a mean between the two extremes.

The Commission visualised the problem of development over a period of 25-30 years, and, in the light of above considerations, decided upon the target of doubling national income in twenty-two years. As population would also increase, living standards would rise by 70 per cent. This is the long-term target.

Individual plans in India are five year plans. The First Five Year Plan gave top priority to agriculture, irrigation and power. It was to rescue the economy from the ravages of war and partition. Secondly, it was to do the necessary groundwork for future planning. Economy must first be strengthened at the base, i.e. agriculture. Increase in production of food, raw materials, and power create appropriate climate for industrial development. The Second Five Year Plan aimed at creating the industrial base. Expansion in the productive capacity for steel and power, provision of increased transport facilities, and stepping up food production formed the core of the Plan.

The Third Five Year Plan proposes to bring about an actual expansion of industries on a sizable scale.

FORMULATION OF A PLAN

Survey of resources. First step in the formulation of a plan consists in setting the targets for the plan period. A pre-requisite of it is a survey of the existing structure of the economy ; its resources and potentialities as well as deficiencies. The Planning Authority should have at their disposal statistics regarding total available resources such as manpower, transport, basic material power of the economy in terms of output of agricultural and industrial products, natural resources and the degree of their exploitation. A survey of existing techniques and levels of their efficiency will also come in handy. Shortcomings of the economy from the point of view of the long-term developmental problem and urgent immediate needs have to be ascertained. A study on the lines indicated above serves a twofold purpose. It helps to avoid bottlenecks of various kinds at later stages. Secondly, lines of economic activity, targets for achievement, location and size of new production units, have all to be decided on the basis of information collected as a result of such surveys. This is why the Planning Commission of India, in its terms of reference, was asked to :

1. "make an assessment of the material, capital and human resources of the country, including technical personnel, and investigate the possibilities of augmenting such of those resources as are found to be deficient in relation to the nation's requirements", and
2. "indicate the factors which are tending to retard economic development, and determine the conditions which, in view of the current social and political situation, should be established for the successful execution of the plan."³

General considerations. In deciding upon the targets, the Planning Authority has to keep in view three general considerations. In the first place, the targets must be optimal. Planning is justified on grounds of bringing about rapid economic growth. Hence targets must be higher than what could be achieved without planning. There is, on the other hand, a danger in setting them too high. If efforts are made to achieve these targets, they necessitate a very high rate of saving and hence demand unbearable sacrifice. If targets set are not achieved, they cause demoralisation and make the chances of fulfilling the targets of future plans slender. Hence targets must not be over-ambitious, though they must be bold.

Secondly, targets set for various sectors must be mutually consistent. If we plan for the expansion of a number of industries, all of which use the same raw material (or the same kind of labour), we

must make sure that materials and workers are also available in the requisite quantities. If we set out to achieve targets, which are mutually incompatible or inconsistent, we are sure to fail in our efforts.

Third, planning requires a co-ordinated activity on the part of the central, regional, and local authorities. In defining the targets, the Planning Authority must also define the part to be played by the various public authorities in the achievement of these targets.

Particular factors. In addition to the above general considerations, there are some particular factors regarding which decisions have to be taken. It is on these decisions that actual fixation of targets depends. These are as under :

1. *Rate of growth.* First question to be answered is : at what rate will national income be stepped up ? Increase of national income comes from making use of the unutilised and underutilised manpower and by increasing investment. There are limitations in both these respects. Increased use of manpower involves training and education of workers, because in the initial stages of development available labour is mostly unskilled and untrained. We have also noted earlier that increased use of manpower implies creation of new incomes, while in the initial stages output of consumption goods may not increase as fast. For both these reasons much reliance cannot be placed on the use of unutilised manpower. As the process of planned development proceeds, it becomes possible to make progressively increasing use of manpower. But whether it be the initial or the later stages, the importance of investment remains very high. We have already pointed out that a fast increase in saving and investment causes a heavy sacrifice. Moving too slow is also undesirable. Targets in respect of raising incomes must be optimal.

2. *Increase in investment.* We find that the problem of development is mainly the problem of increased investment. Having decided the rate at which incomes are to be increased, the relevant rate of increase in the rate of investment has to be calculated. The amount of additional investment appropriate to a given increase in national income depends on the investment-income ratio.

Investment-income ratio depends on a number of factors. It depends on the sizes of the firms to be started. Another determinant is the vertical integration of processes in these firms. It also depends on their spread of products and the extent of the markets covered by them. For instance, social and economic overheads, like housing and transport, have a high investment-income ratio. This ratio is also determined by the choice between capital-intensive and labour-intensive methods. Last, and the most important, factor is the decision regarding how far the additional output is planned to consist of consumer goods and how much of it shall be producer goods. The latter require a much larger investment to create a given amount of income.

3. *Producer goods versus consumer goods.* Basic determinants of the ratio between producer and consumer goods are the kind of natural

resources which the country possesses and the stage of economic development. Most of the capital goods industries, like iron and steel and cement industries, use mineral products as raw materials. Consumer goods industries, on the other hand, generally use agricultural and forest products as raw materials. Thus the kind and quality of natural resources determine the types of industries which can be started in the country. Similarly, in the earlier stages of economic development, there is a greater need for capital goods industries. As development proceeds, the ratio of consumer goods industries to producer goods industries rises.

In a closed economy, decisions are guided by what kind of consumer goods are to be given to the people. Then the production of producer goods has to be adjusted. Producer goods industries must produce machinery and must also provide for repair and replacement in the consumer goods industries as well as the producer goods industries themselves. But in the modern world no country can have an isolated economy. Because of trade relations with other countries, the influence of competition and wider markets on both the categories of industries has to be taken into account. In this respect, need for self-sufficiency in certain items has also to be recognised.

4. *Public sector versus private sector.* Income from commercial undertakings, taxes, loans, and deficit financing, are the four sources which enable a government to lay its hands on resources. Commercial undertakings are, at any time, given. Taxes provoke protests and, beyond a limit, are likely to make the government unpopular. Advancement of loans depends on the will of the people. Deficit financing, after a limit, releases inflationary forces. Thus there is a limit to the resources which a government can procure. This determines the maximum of investment in the public sector and, hence, is an important factor in deciding relative roles of public and private sectors. Obviously, the two sectors are not rival but complementary to each other.

The state must undertake responsibility for defence. Most of the defence requirements, especially arms and ammunition, must be produced in state-owned factories. Atomic energy must also be a state monopoly. Social monopolies would better lie in public sector. Similarly industries which constitute external economies or social and economic overheads (irrigation, power, transport, communications, and social services) must belong to public sector, because private sector would not undertake responsibility for them. Certain industries may be technically complementary and, hence, would better lie, all together, in one sector or the other. Lastly, it may be desirable to have some industries in public sector to avoid "clash and cross-purposes."

5. *Foreign exchange requirements.* Exchange component of industrial expansion has to be estimated. An assessment must also be made of foreign exchange which it would be possible to procure. Foreign aid, loans, and investments are difficult to predict. But the

most important sources of foreign exchange is exports. Important considerations in this respect are: how far it would be possible to restrict imports of non-essential goods; how far it would be possible to push up exports; and how far "exports" will be consumed at home on account of rise in incomes and restriction of imports. It must also be remembered that too much reliance on deficit financing, which raises the price level apart from its other adverse effects, aggravates imbalance in the balance of payments.

6. *Choice of technique.* If investment is increased and techniques of production are not improved, additional investment will increase employment and create new incomes. New-comers will have a tendency to consume most of their incomes. Thus while production and employment will increase initially, savings will not grow and advancement will be blocked at an early stage. On the other hand, use of higher techniques will increase existing incomes and will also increase savings. But this may result in technological unemployment. A choice has of course to be made, but one fact is obvious: To put employment before growth is to get neither. Growth must be accorded a higher priority. Expansion in avenues of employment is bound to follow in due course of time.

7. *Transport facilities.* Expansion of existing industrial units and instalment of new units necessitate larger movements of materials, fuel, machinery, and products. Expansion of transport facilities, therefore, must accompany increase of output. Secondly, development results in the growth of exchange economy in comparison to non-exchange economy and thus demand for transport facilities increases. Lastly, increase in transport facilities is helpful in effecting a more economic allocation of resources. In the light of these three factors, the Planning Authority must decide the extent to which more roads and railway lines must be constructed and facilities on existing roads and lines must be increased.

Strains of development. Wrong decisions in respect of one or more of the above factors are bound to create difficulties. Very wrong decisions may torpedo planning altogether. Even otherwise, some strains are bound to be felt. These strains may take the form of scarcities and high prices, transport bottlenecks, shortage of foreign exchange, demand for higher wages, etc. etc. Careful planning will moderate the influence of these strains, but it is almost impossible to completely eliminate strains.

EXECUTION OF PLANS

Targets having been laid down, the next step is to channelise productive resources into the desired lines of production. The problem here is the choice of method of mobilising them into action. Professor Arthur Lewis has drawn a distinction between mobilisation of resources (i) through direction by the Planning Authority, and (ii) through the indirect method of giving inducements, i.e. creating incentives.

He, in fact, poses this question of choice between the two methods as the central issue in the discussion of planning.

Planning by direction. This method implies that the Planning Authority takes charge of productive resources and uses them in accordance with the list of social priorities. Free play of market forces is restricted. Both saving and investment become the care of the Planning Authority. As all resources are taken care of by the government or the Planning Authority, their allocation is completely determined by the same Authority. Planning in such a case is comprehensive; it embraces entire economic life of the community. It is called totalitarian or collectivist planning. Collectivist planning is a concomitant of a controlled economy, and is the method in which communist countries believe.

The method of planning by direction requires an accurate knowledge of the size, efficiency, and specificity or otherwise, of all resources. For it has to decide how each unit of every resource shall be used in the exceedingly complex economic system. Success can be achieved only if there are backward as well as crossward balances in the targets. For instance, if it is planned to increase housing facilities, it will be necessary to plan a simultaneous increase in the supplies of necessary materials like cement, steel, wood and bricks, for the purpose. Similarly the target fixed has to be co-ordinated with transport facilities for carrying the materials required to actual places of construction. And the planned construction of houses must be considered in conjunction with the need for factories, schools, hospitals, bridges, etc., which use the same materials.

Drawbacks of planning by direction. There are some drawbacks in the method of planning by direction. In the first place, it requires the Planning Authority to have a comprehensive and detailed knowledge about the efficiency and capacity of every unit of every factor of production. Such a knowledge is impossible. Maladjustments are bound to crop up, especially because price mechanism is not allowed to play any significant role.⁴

Secondly, planning by direction is characterised by inflexibility. When a plan is ready, it is an integrated whole. Any shortfall anywhere or any change necessitated by circumstances, will necessitate changes all round and, hence, will upset the whole plan. It must, however, be admitted that unexpected occurrences prove harmful even in an economy where market mechanism is in operation.

Lastly, planning by direction has been associated with authoritarianism, bureaucracy, and curtailment of economic liberty. It robs the people of their right of free choice as consumers. People can buy only those things which are available. By determining the pattern

⁴ It must be noted that even when this method of planning is adopted, pricing system is not completely suspended. It is unusual that distribution of all goods produced is done by ration cards. Price system is assigned some rôle in distribution of goods among the consumers.

of production, the Planning Authority also determines the pattern of consumption. Moreover, as rationing and price controls are introduced, consumers' sovereignty is further curbed. Similarly workers are not free to choose their occupations. The Planning Authority is expected to do it for them. To these curbs on liberty must be added the fact that rationing and controls are the bureaucrats' paradise. They revel in the exercise of extensive powers and endeavour to extend them still further at the slightest pretext. This provides scope for corruption and nepotism.

Planning by inducement. The other method is that the Planning Authority induces the people, through fiscal and monetary policies and through appropriate price policies, to act in certain desired ways. In this connection, public expenditure and taxation programmes have a very important role to play. Taxation policy has to be so framed that it discriminates in favour of investment as against consumption. It can also be so conceived as to help channelisation of investment into desired lines. Similarly subsidies can be granted to producers of certain commodities for inducing an increase in their production. A very relevant illustration of the above is imposition of a cess on the production of certain qualities of cloth by mills and subsidy in respect of the same to hand-made products.

Monetary policy is also an effective instrument of inducement as interest rate is one of the determinants of saving and investment. Quantitative methods of credit control can help to maintain prices at a given level, or to change the general level of prices as desired. It is, however, the qualitative methods of control of credit which can be selective and which can help in channelising investment into desired lines. These methods can be used for directing or diverting investment.

Lastly, price mechanism has a role to play in inducing people to undertake production according to priorities. For example, falling agricultural prices will mean a disincentive, and rising prices an incentive, to the farmers. If the country plans to produce larger quantities of agricultural output, it will have to stabilise prices or raise agricultural prices to afford the agriculturist the needed incentive. It must be noted that pricing can be used not only for directing and diverting resources but also for reduction of inequalities among the industrial groups.

Drawbacks of the method of inducement. One difficulty with this method of planning is that adjustments between demand and supply are difficult to secure. Some shortages and surpluses are bound to remain. For example, in India the problem is not merely that of raising the agricultural output, but also that of increasing the flow of agricultural surplus to the markets. Production in Indian agriculture is mainly for self-consumption. As the output of an individual farmer goes up, his consumption, which has for long been below the nutrition standard, also tends to increase, leaving very little marketable surplus. Here the method of inducement does not prove effective in the desired manner, and directive measures have to be adopted.

Planning is undertaken to tackle big problems ; it aims at bringing about big changes. Methods of monetary and fiscal control are too mild instruments to effect big changes. If the malady is desperate, only desperate remedies prove effective. Methods of inducement, therefore, cannot carry planned development very far.

In the case of underdeveloped economies, planning through inducement has severe limitations. In such a country, the problem is twofold. A sufficiently fast increase in investment must occur. Also, it must go into the desired lines. Incomes are so low that to depend on incentives for the requisite increase in saving and investment would be to entertain hopes which cannot be realised. But the more important point is that investment may not flow into the desired directions. It will go into the lines which afford high profits and not which are socially desirable. The state must actively direct investment into activities where social gain is greater than private gain.

Conclusion. Choice between the two methods is governed by values which a country has decided to adopt. In a communist country, planning by direction is real planning. On the other hand, in an economy wedded to capitalist system of social organisation, planning by inducement is the major tool.

Analytically, however, the two methods are complementary. Both of them can be employed together for achieving a speedy progress and keeping, at the same time, democratic institutions intact. The Planning Authority need not take charge of the total resources. Quite a sizable proportion of them may be allowed to stay in private hands. Consumers may be given ample freedom to dispose of their incomes in the manner of their choice. Savings are, then, mostly left to independent decisions, but they are increased by taxation and incentives. The state obtains resources through taxes, loans, and deficit financing. Consumption is restricted to appropriate levels by taxation. The state undertakes expansion of economic and social overheads as well as of those industries where private firms fight shy of entering.

This is the line which has been adopted in India for her development. She has decided to establish a socialist pattern of society on the basis of mixed economy, i.e. an economy in which both private sector and public sector have effective roles to play.

Further Readings :

1. Government of India : *First Five Year Plan*, Chs. I and II.
: *Second Five Year Plan*, Chs. II, IV, V.
2. Arthur Lewis : *Theory of Planning*.

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